

Fig. 1A (prior art)

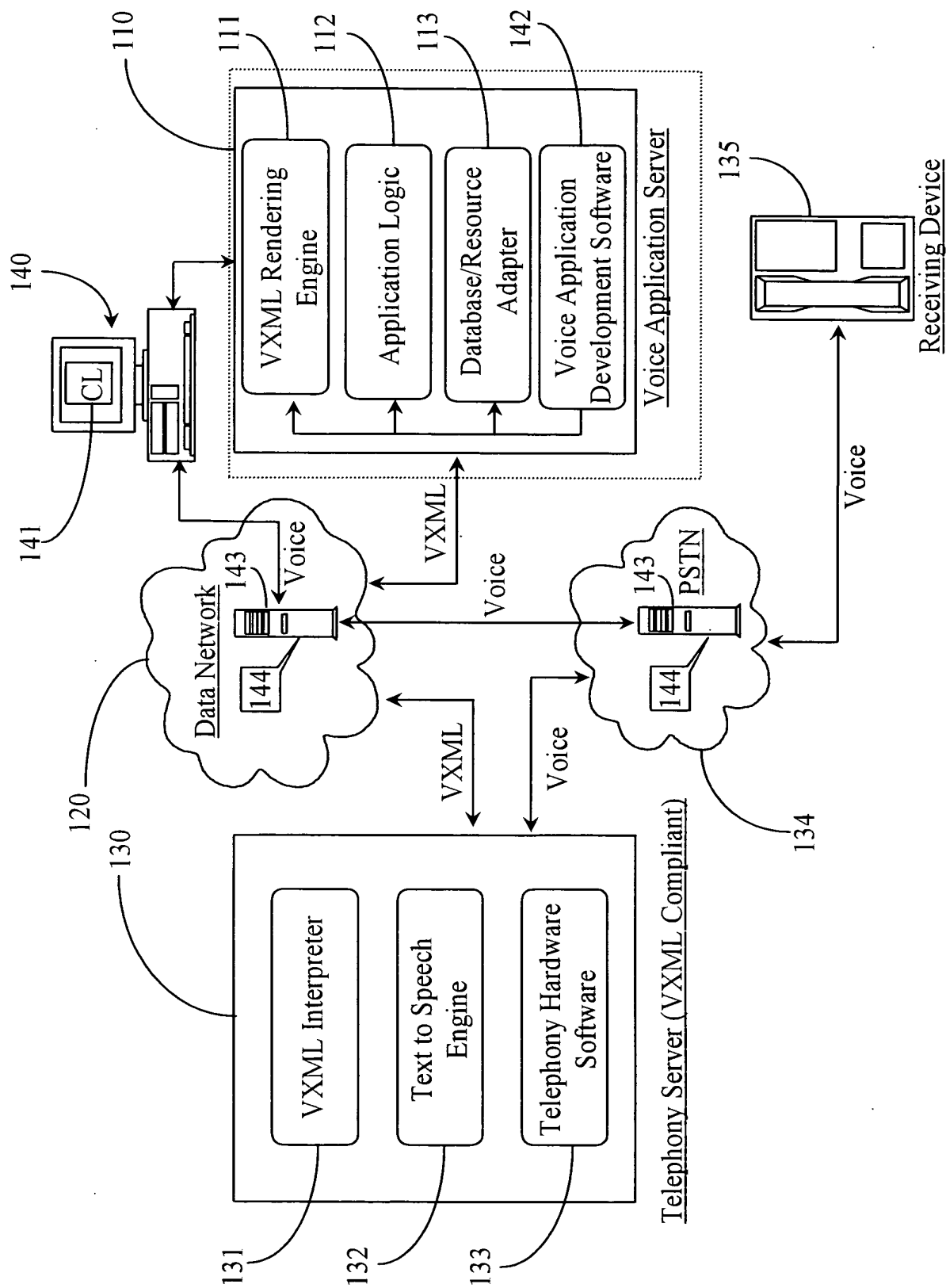


Fig. 1B

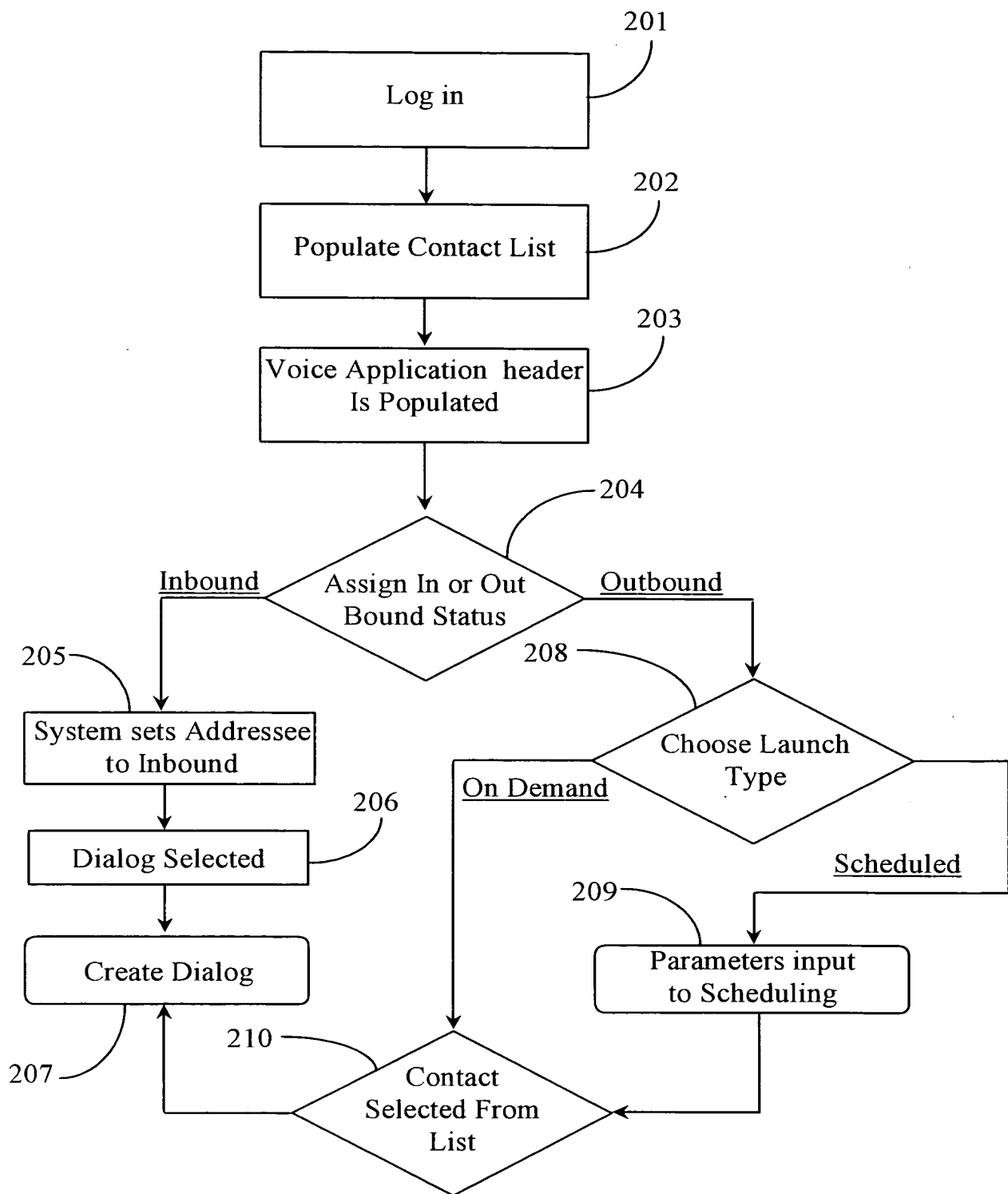
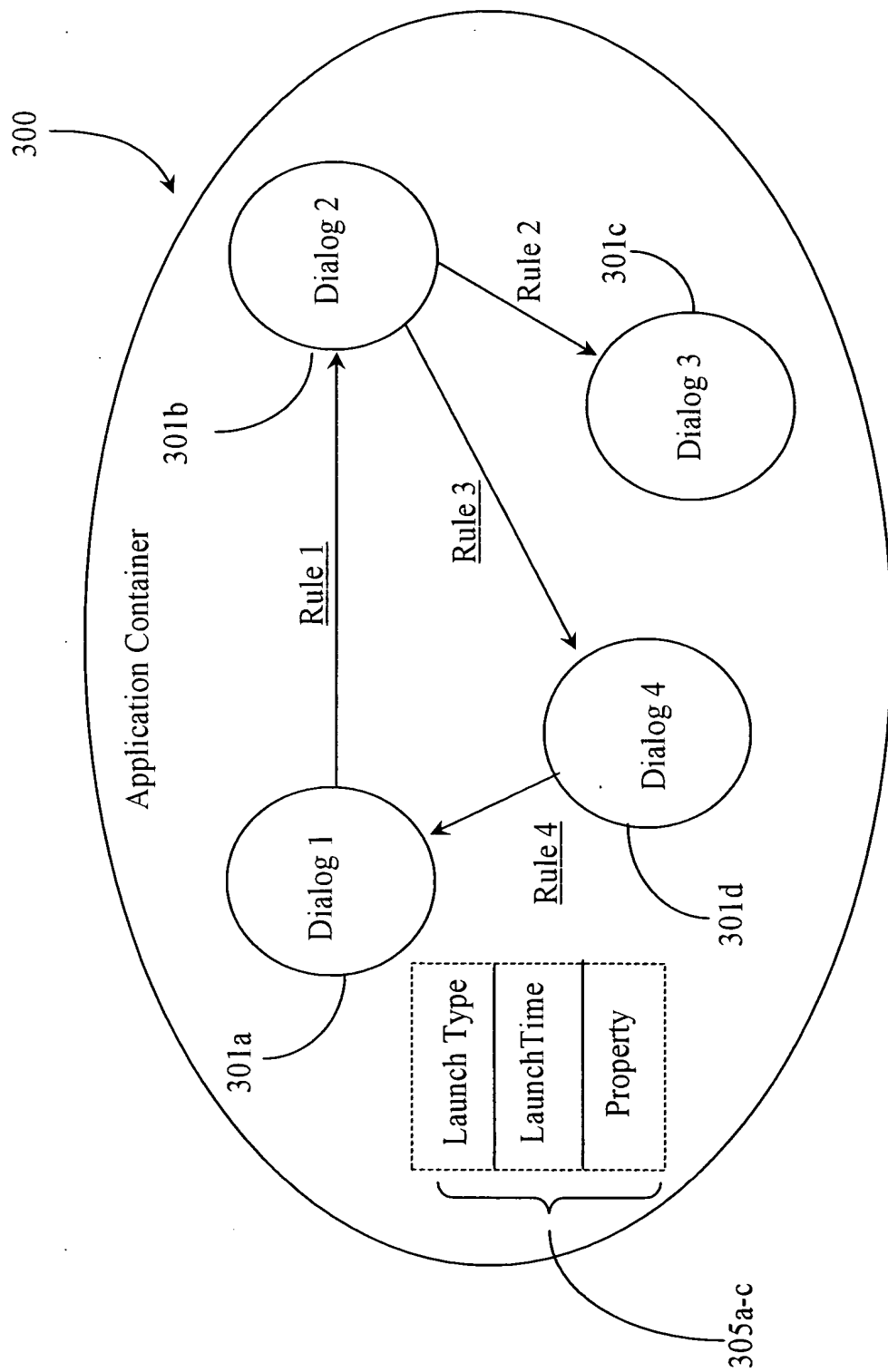
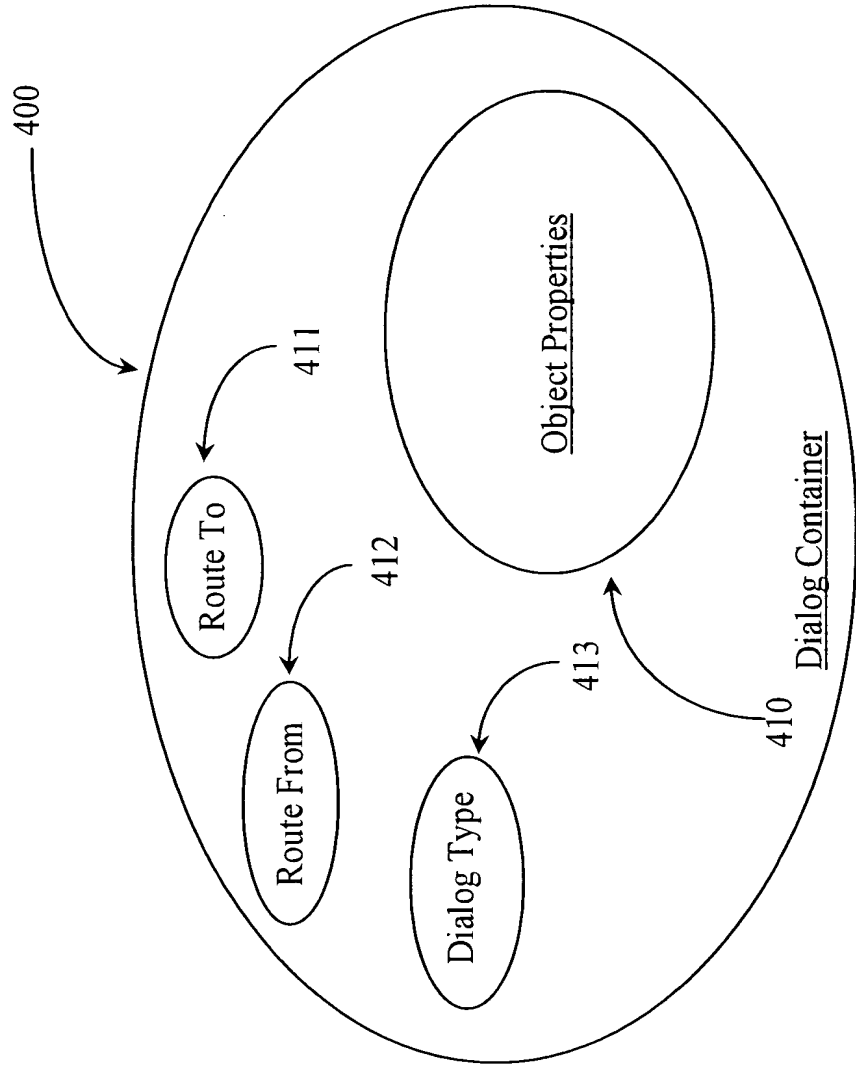


Fig. 2



Voice App Object Model

Fig. 3



Dialog Object Model

Fig. 4

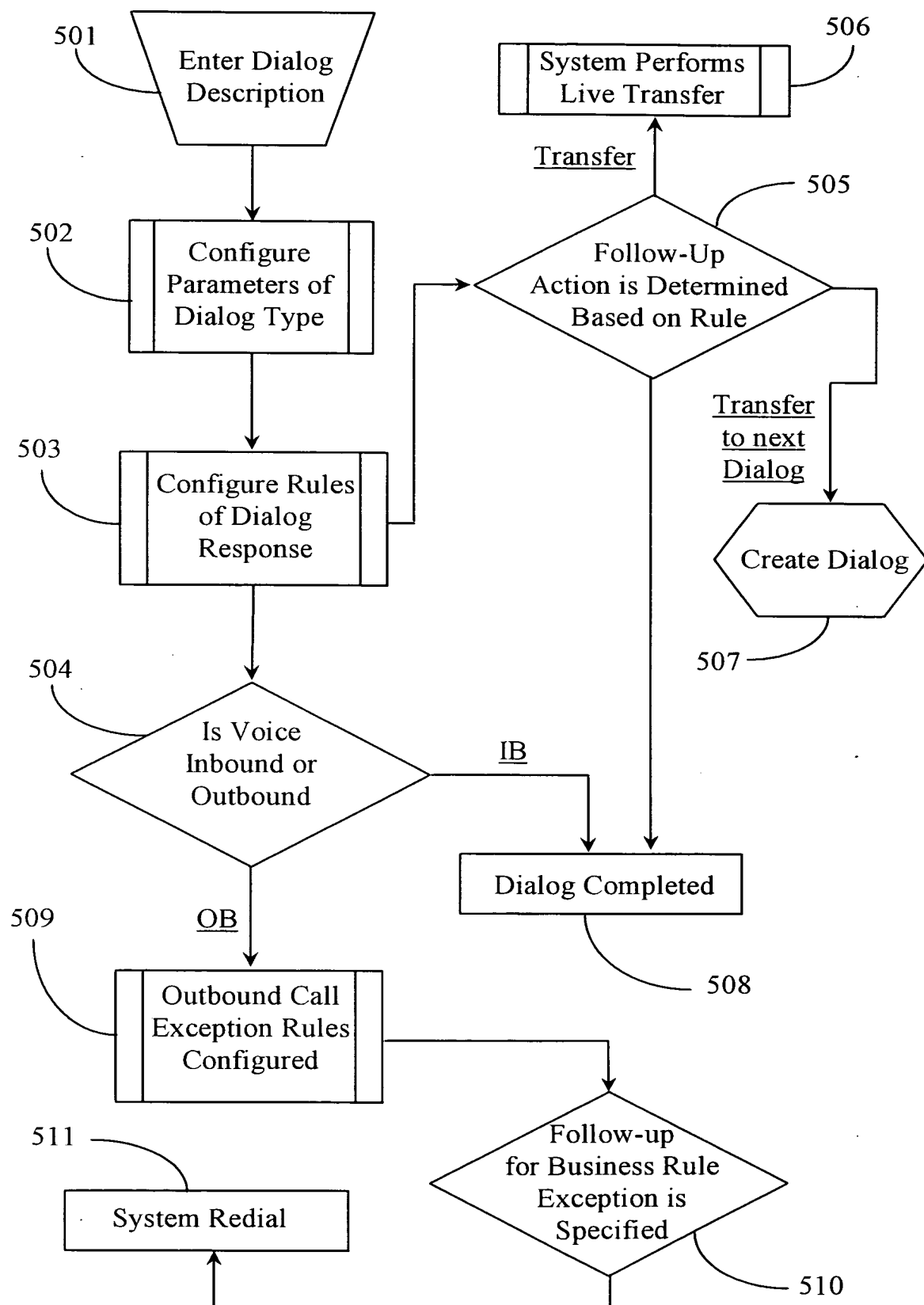


Fig. 5

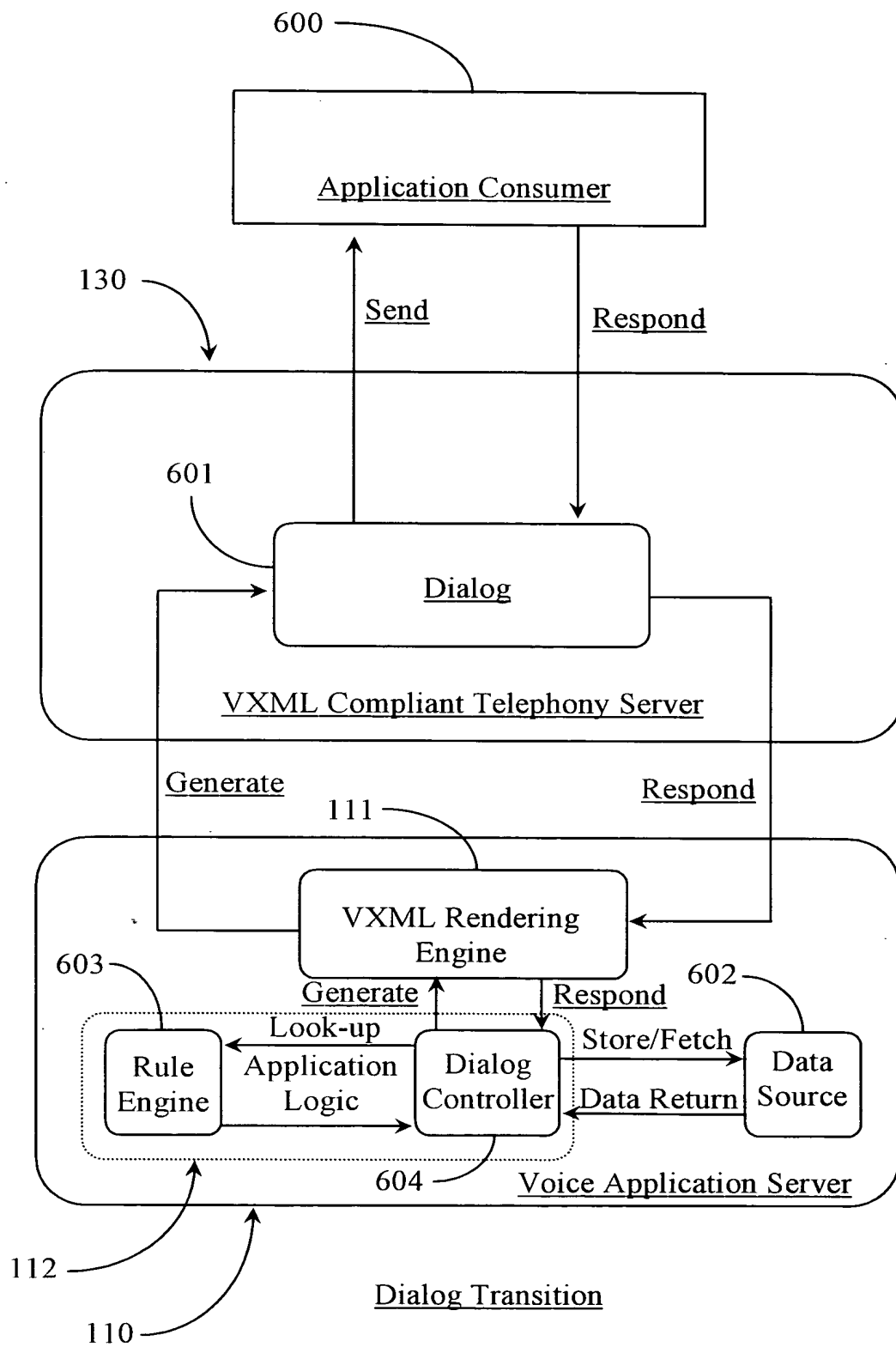


Fig. 6

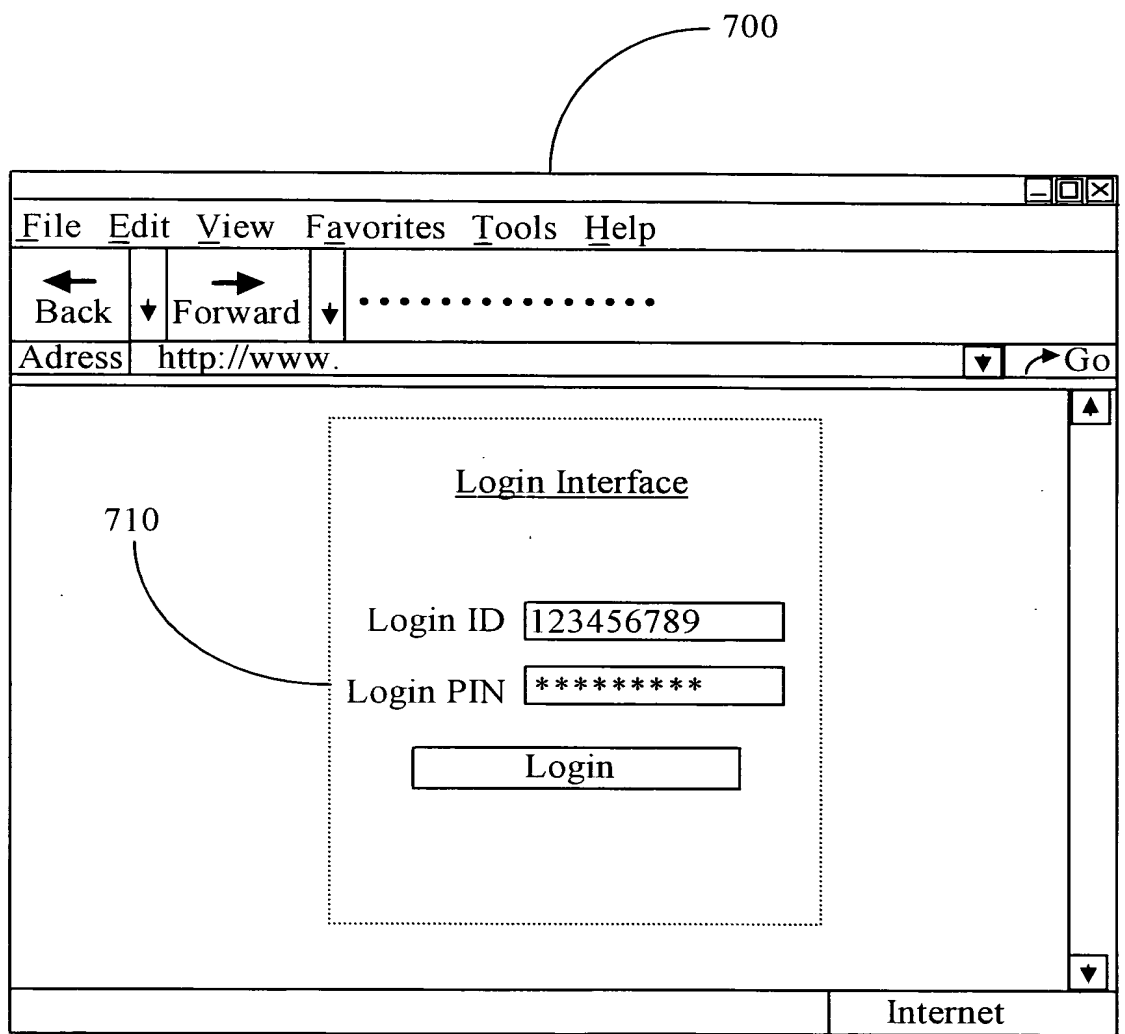


Fig. 7

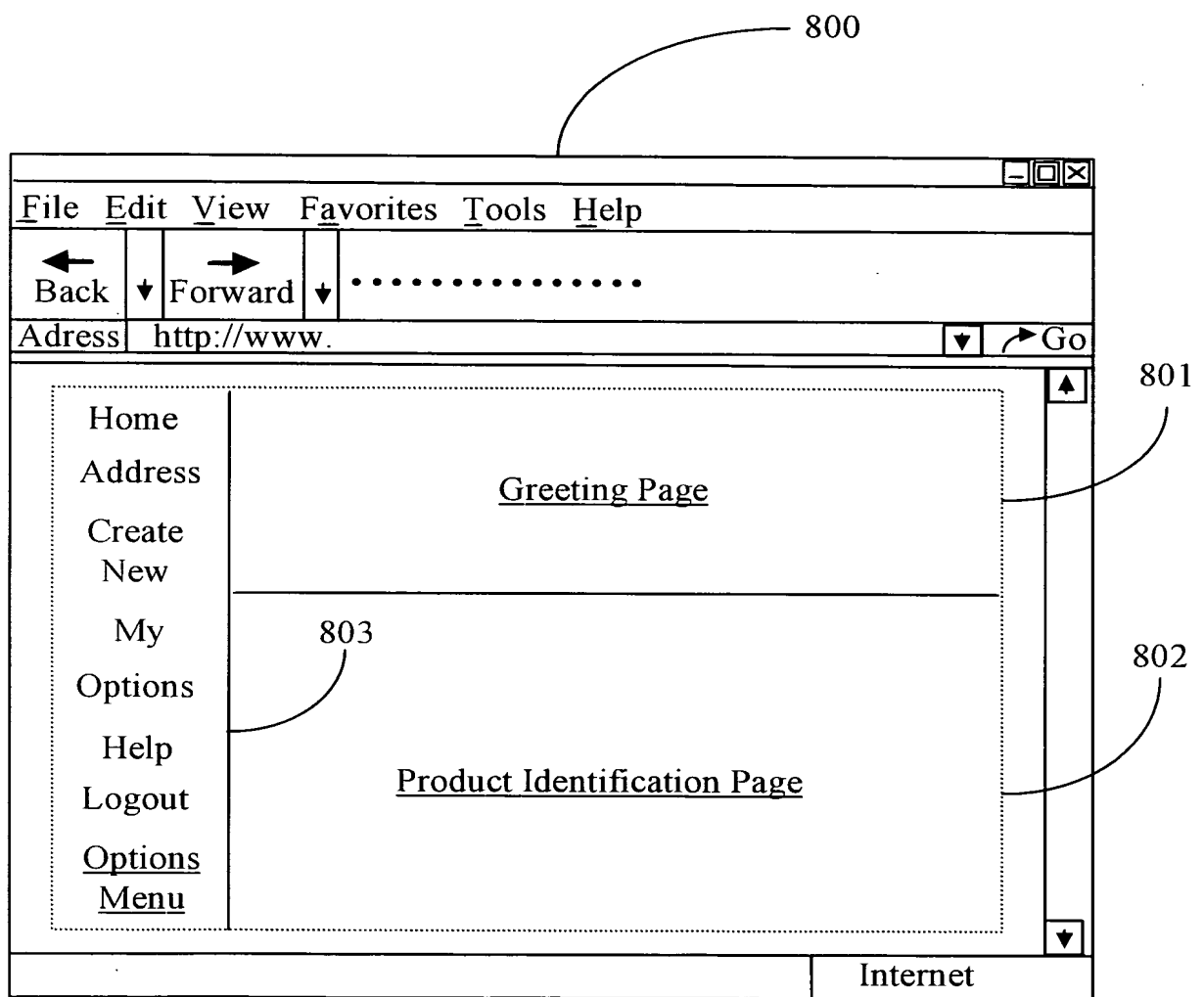


Fig. 8

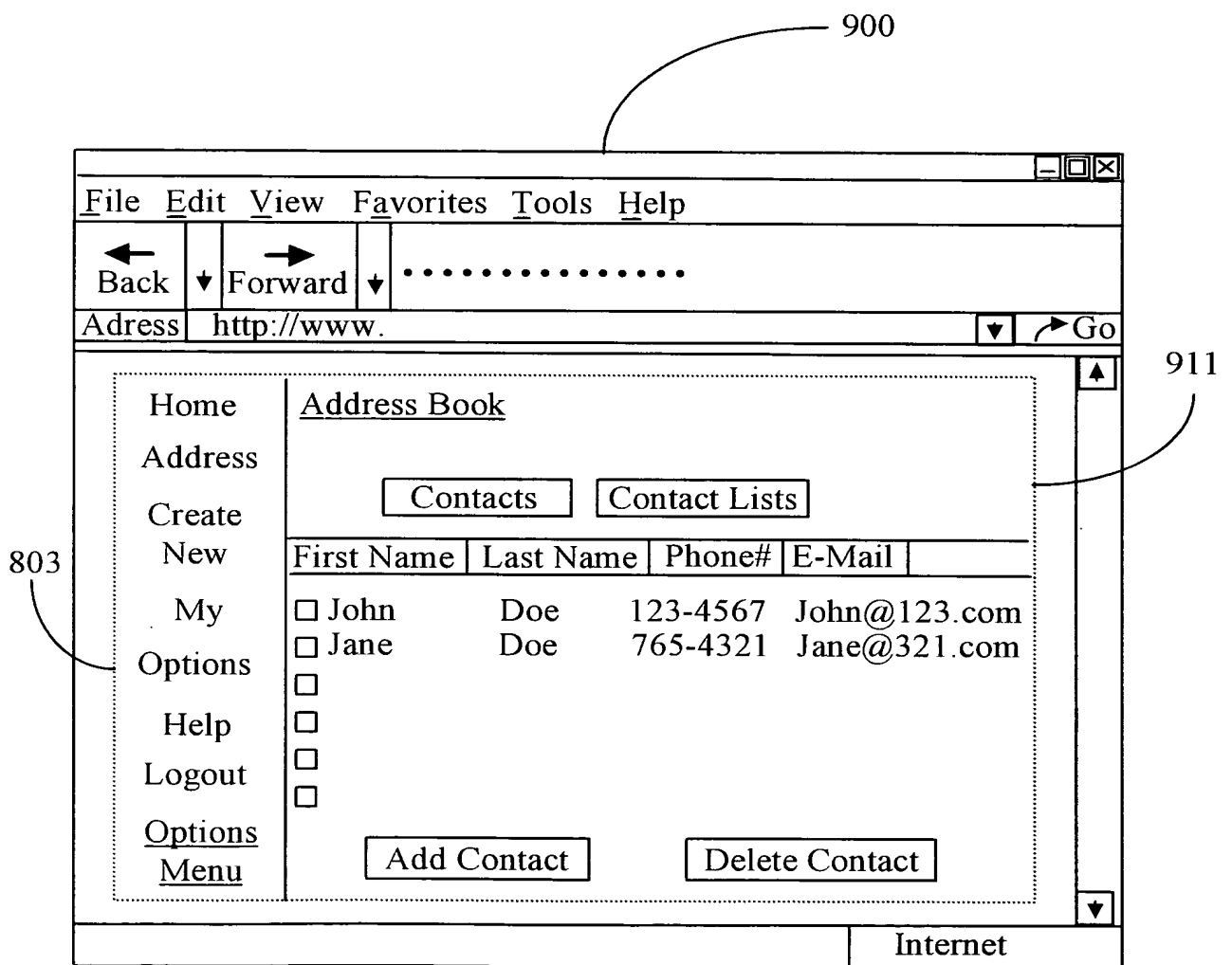


Fig. 9

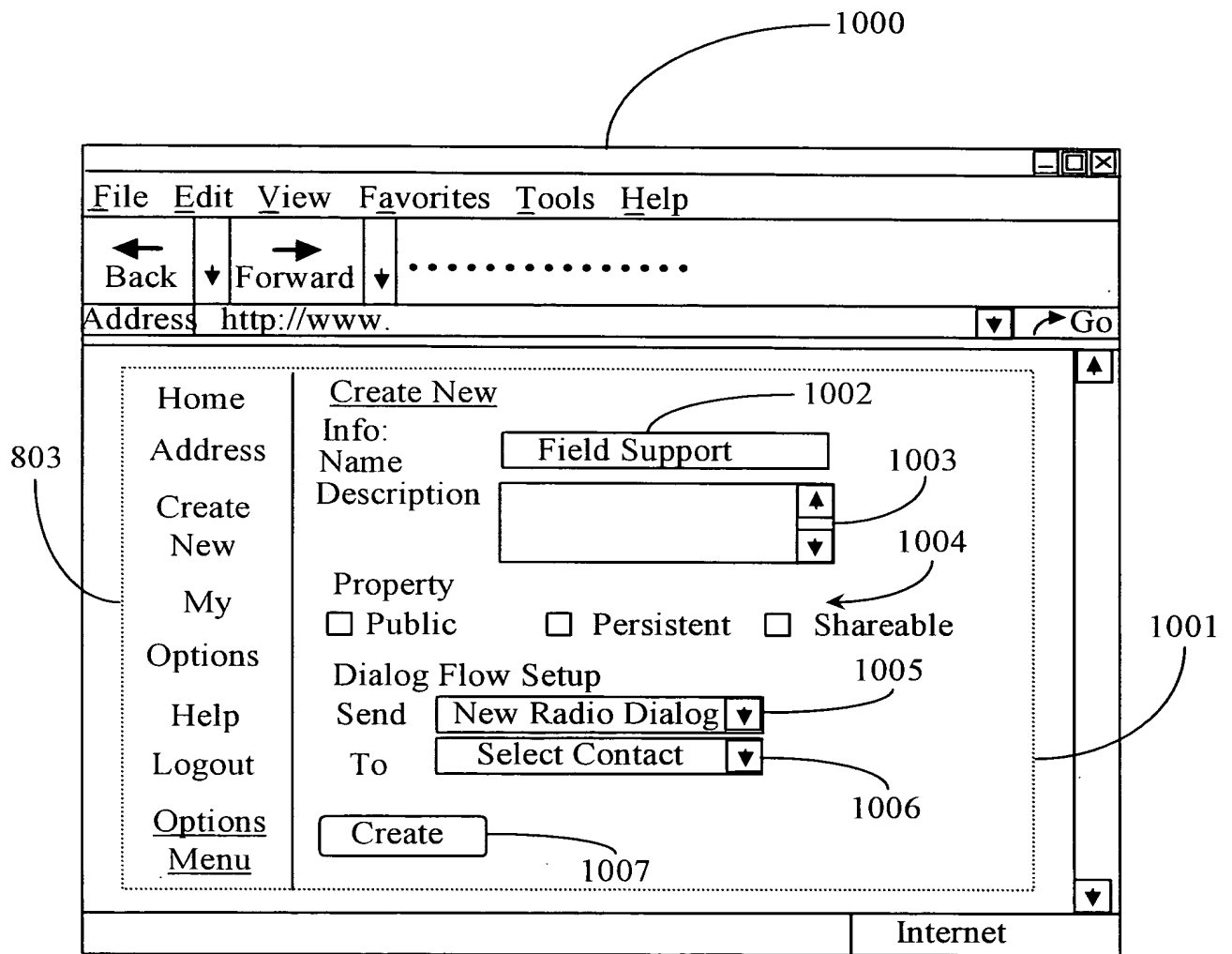


Fig. 10

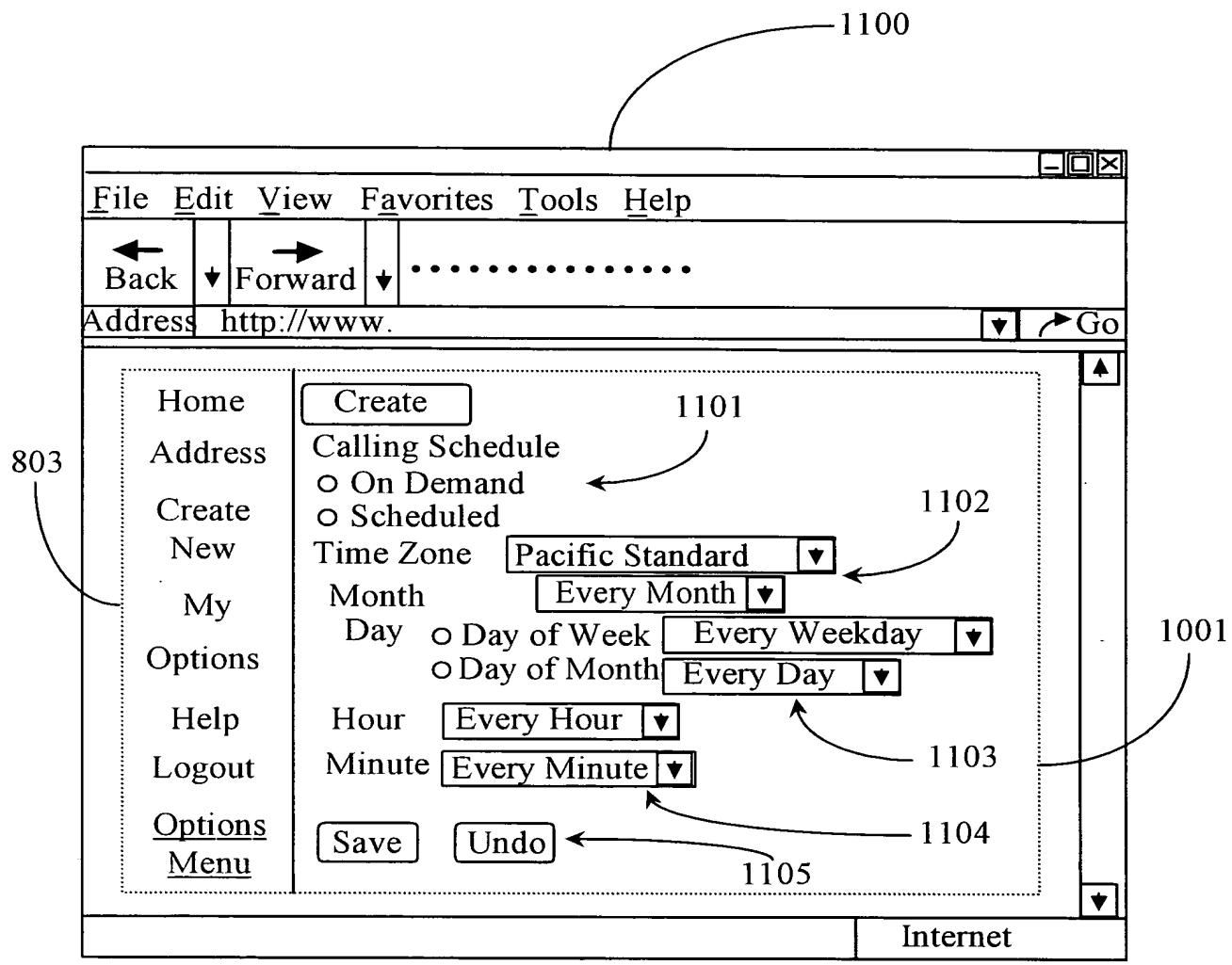


Fig. 11

1200

1201

1202

1203

Dialog Design Panel

Route to John Doe

Dialog Name

Field Support

Dialog Description

Save Dialog

Save and Close

Undo Changes

Radio Dialog Expected Responses

☐ Response
 Follow-Up Action

☐ Yes
 ☒ No Action
 ☒ Connect
 Select

☐ No
 ☒ No Action
 ☒ Connect
 Select

☐ Send
 R-Dialog
 To
 Select
 Details

☐ Send
 Request
 To
 John Doe
 Details

Create New ResponsesDelete Dialog Response

Route-to Connection Exceptions

Exception

Follow-Up Action

Caller Reject

☒ No Action
 ☒ Redial
 ☐ Send
 RR

To

John Doe

Details

Line Busy

☒ No Action
 ☒ Redial
 ☐ Send
 RR

To

John Doe

Details

Voice Mail

☒ No Action
 ☒ Redial
 ☐ Send
 RR

To

John Doe

Details

Save Dialog

Save and Close

Undo Changes

Dialog Design Window

Fig. 12

1300

1301

1302

1303

Dialog Design Panel

Route from John Doe

Route to Jane Doe

Dialog Name

Field Support

Machine number <resource: Machine_code/> is broken. Are you available to fix it?

Save Dialog

Save and Close

Undo Changes

Radio Dialog Expected Responses

☐ Response
 Follow-Up Action

☐ Yes
 ☒ No Action
 ☒ Connect
 Select
 ☒ Send
 R-Dialog
 To
 Select
 John Doe
 Details

☐ No
 ☒ No Action
 ☒ Connect
 Select
 ☒ Send
 Request
 To
 John Doe
 Details

Create New Responses

Delete Dialog Response

Route-to Connection Exceptions

Exception

Follow-Up Action

Caller Reject

☒ No Action

☒ Redial

☒ Send

RR

To

John Doe

Details

Line Busy

☒ No Action

☒ Redial

☒ Send

RR

To

John Doe

Details

Voice Mail

☒ No Action

☒ Redial

☒ Send

RR

To

John Doe

Details

Save Dialog

Save and Close

Undo Changes

Dialog Design Window

Fig. 13

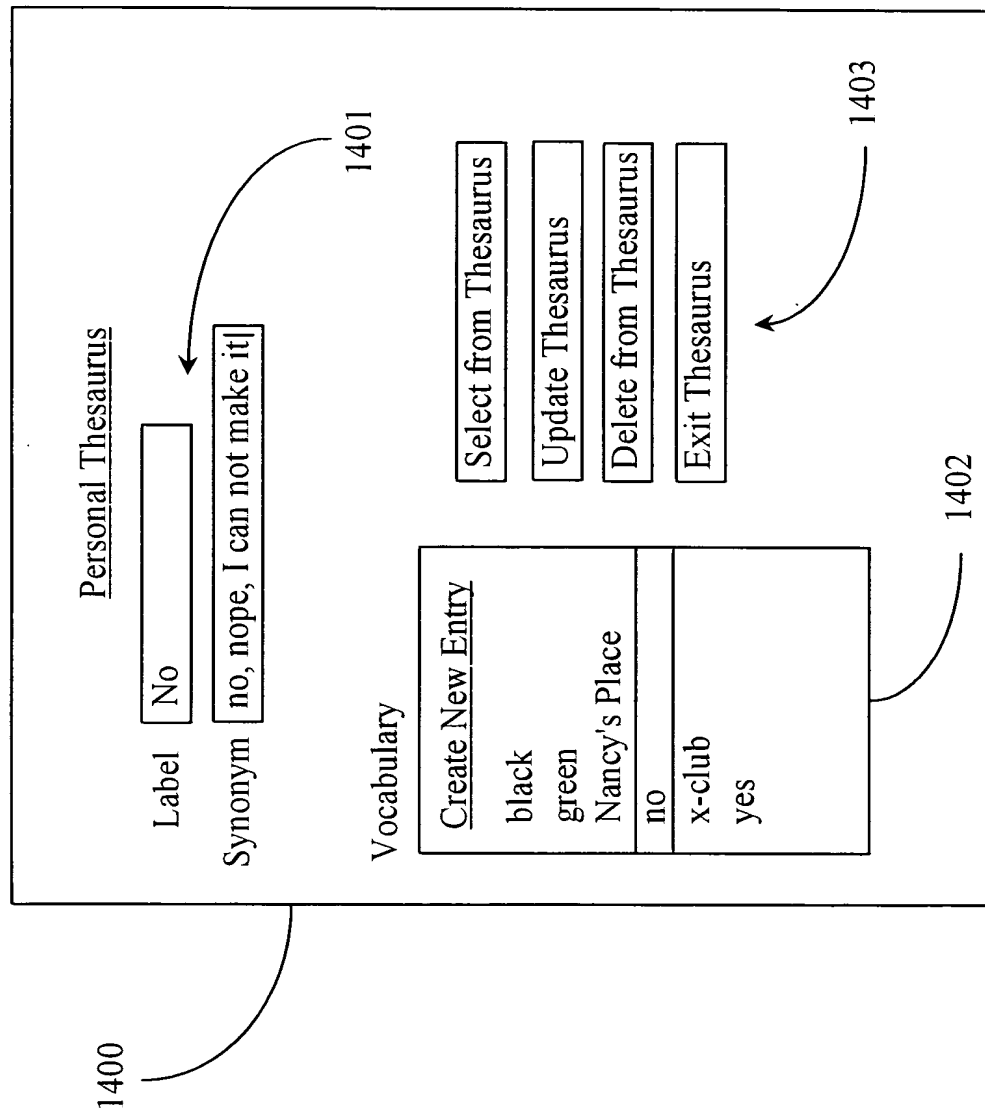


Fig. 14

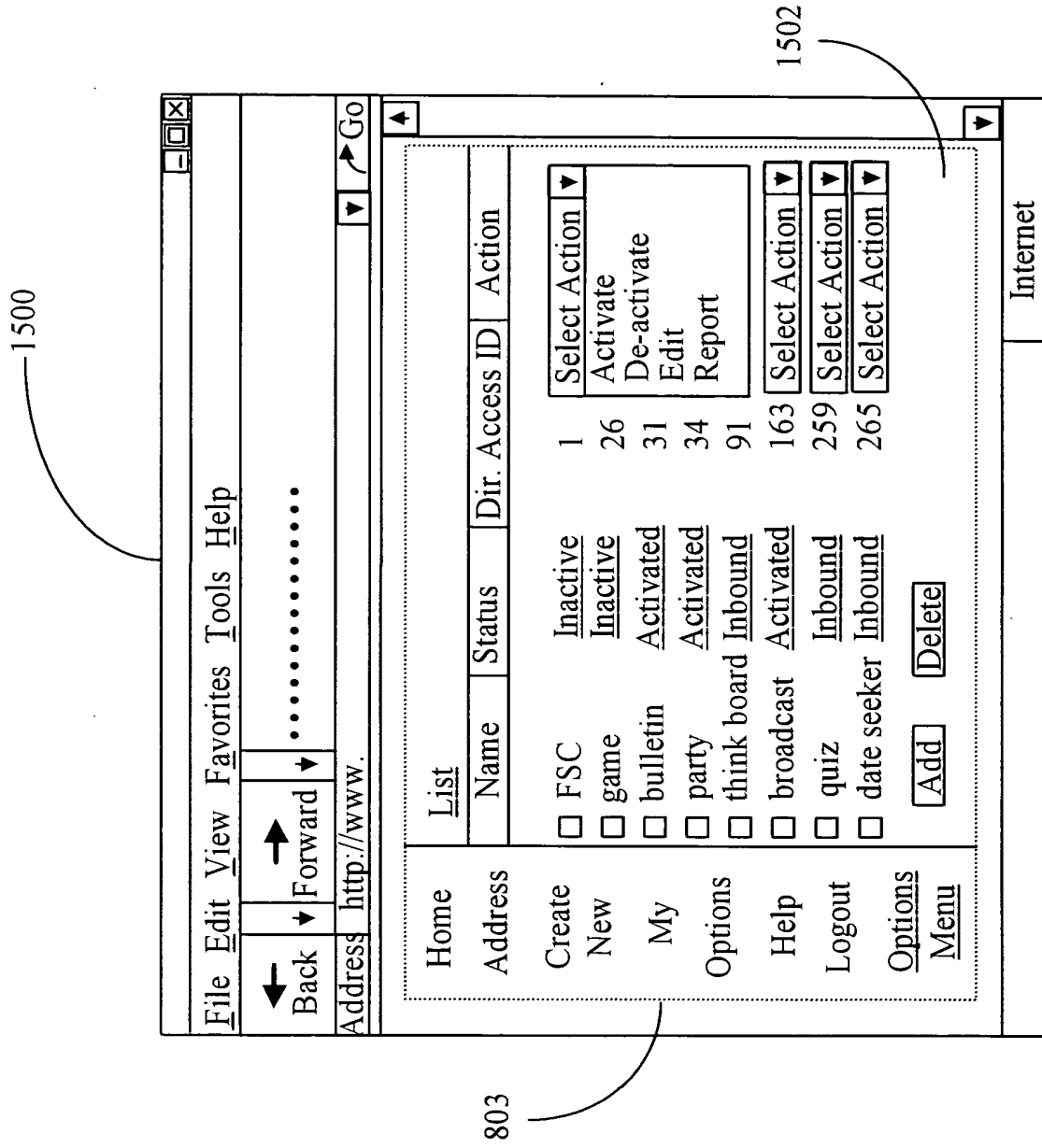


Fig. 15

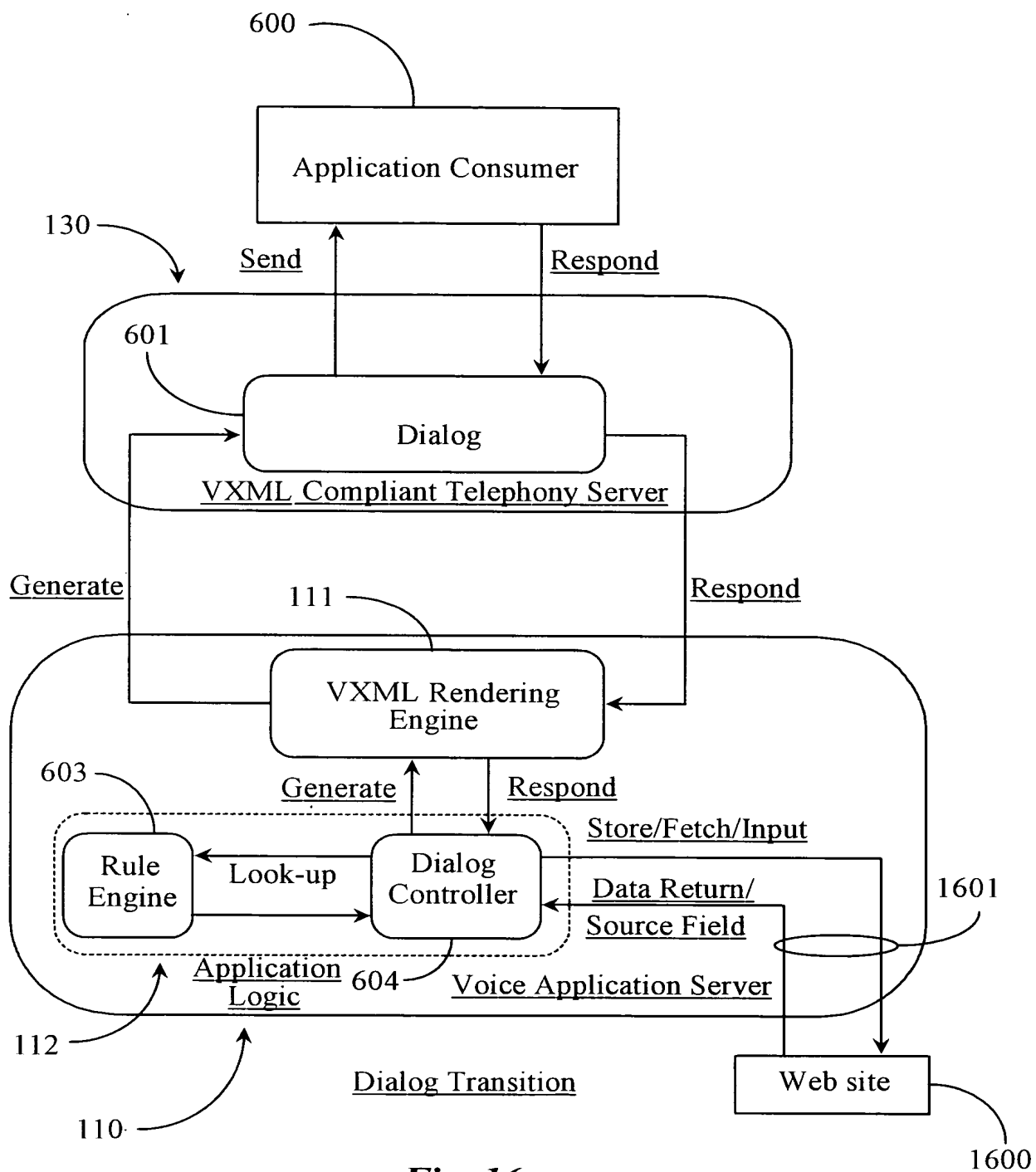


Fig. 16

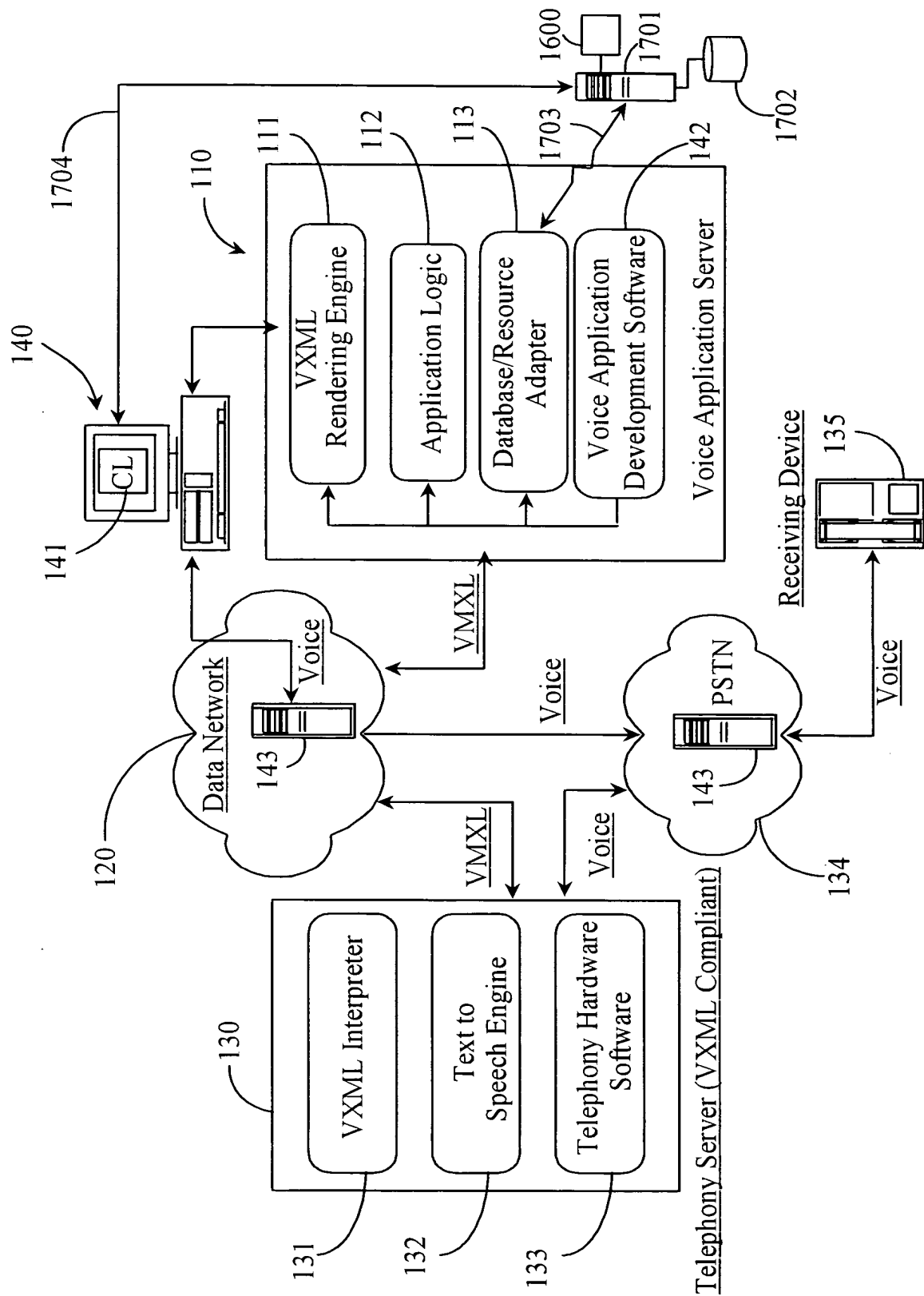


Fig. 17

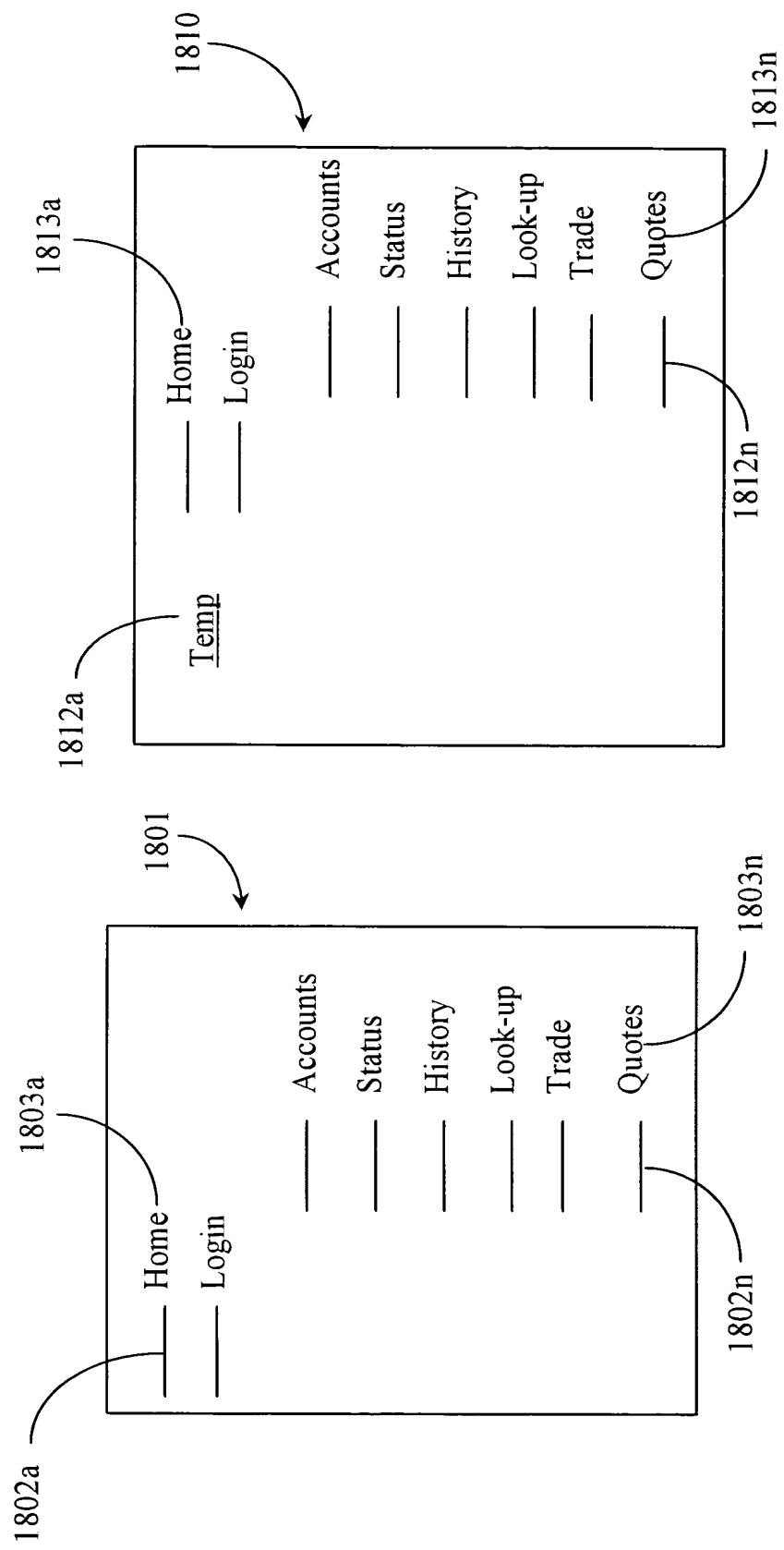


Fig. 18

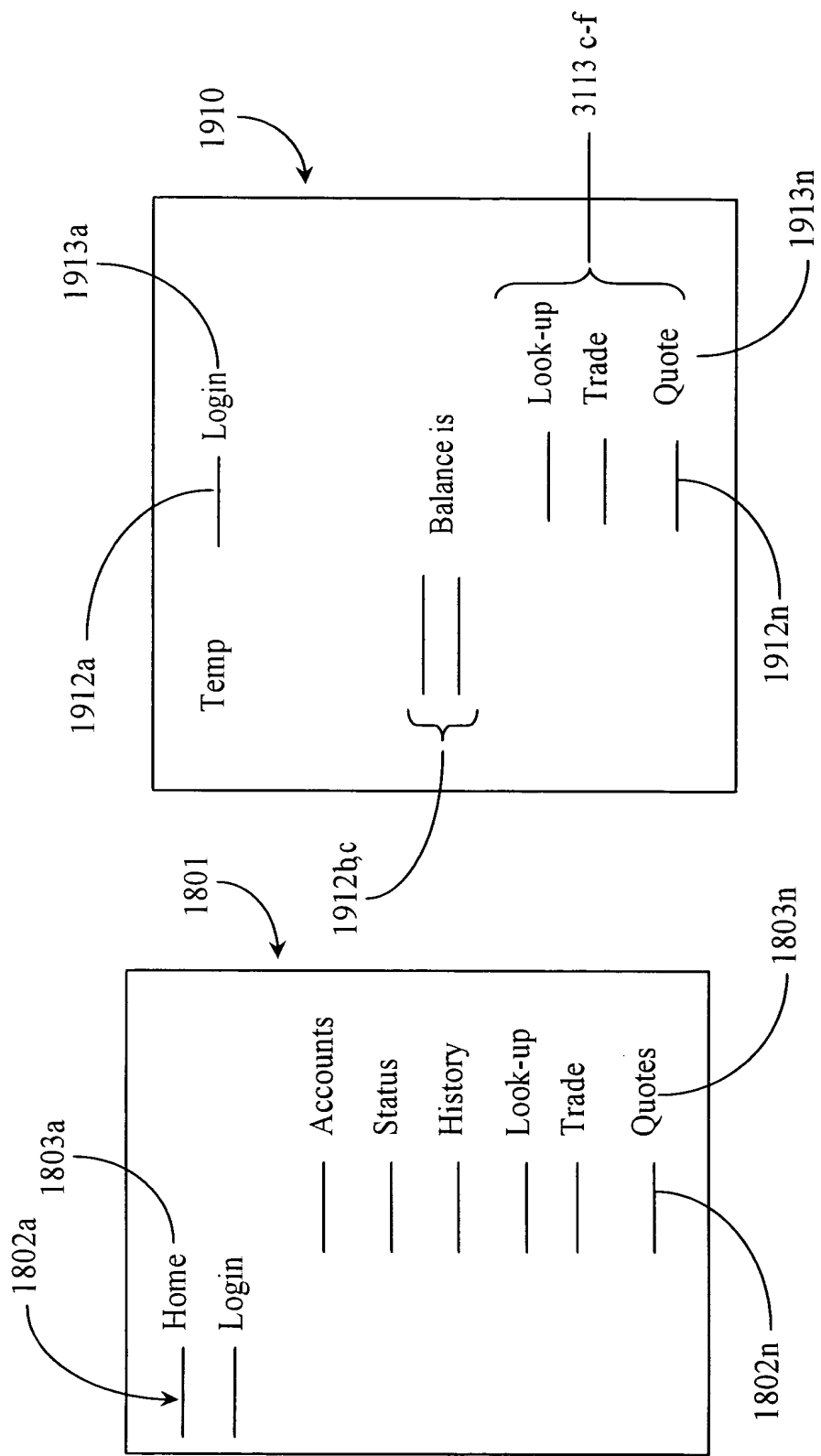


Fig. 19

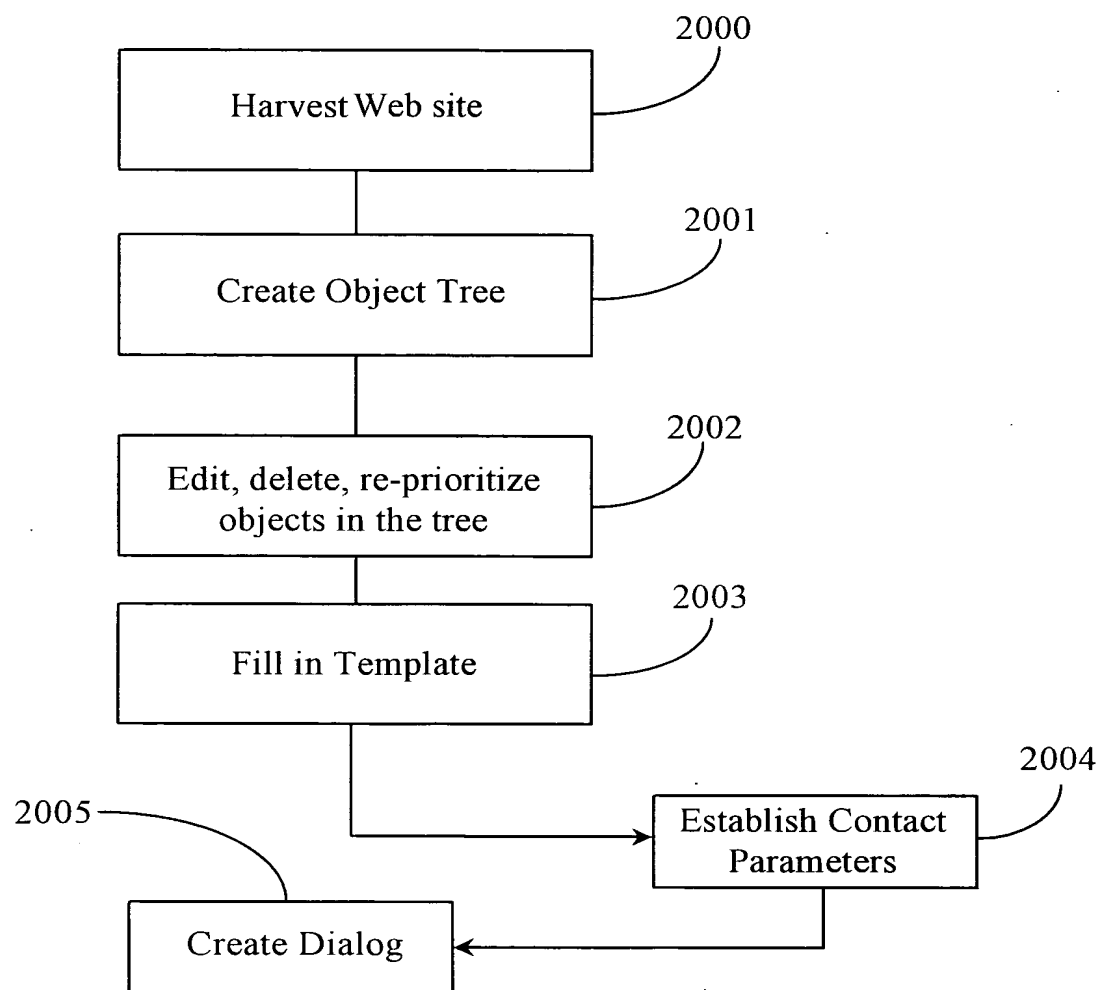


Fig. 20

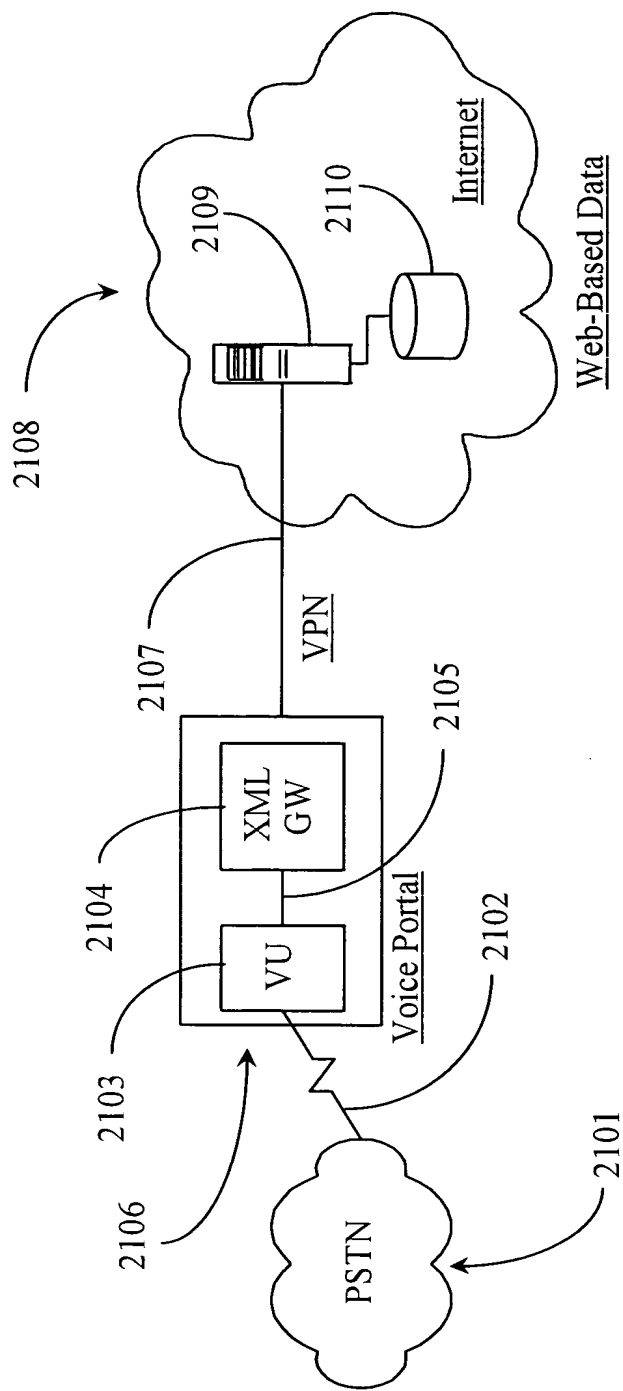


Fig. 21

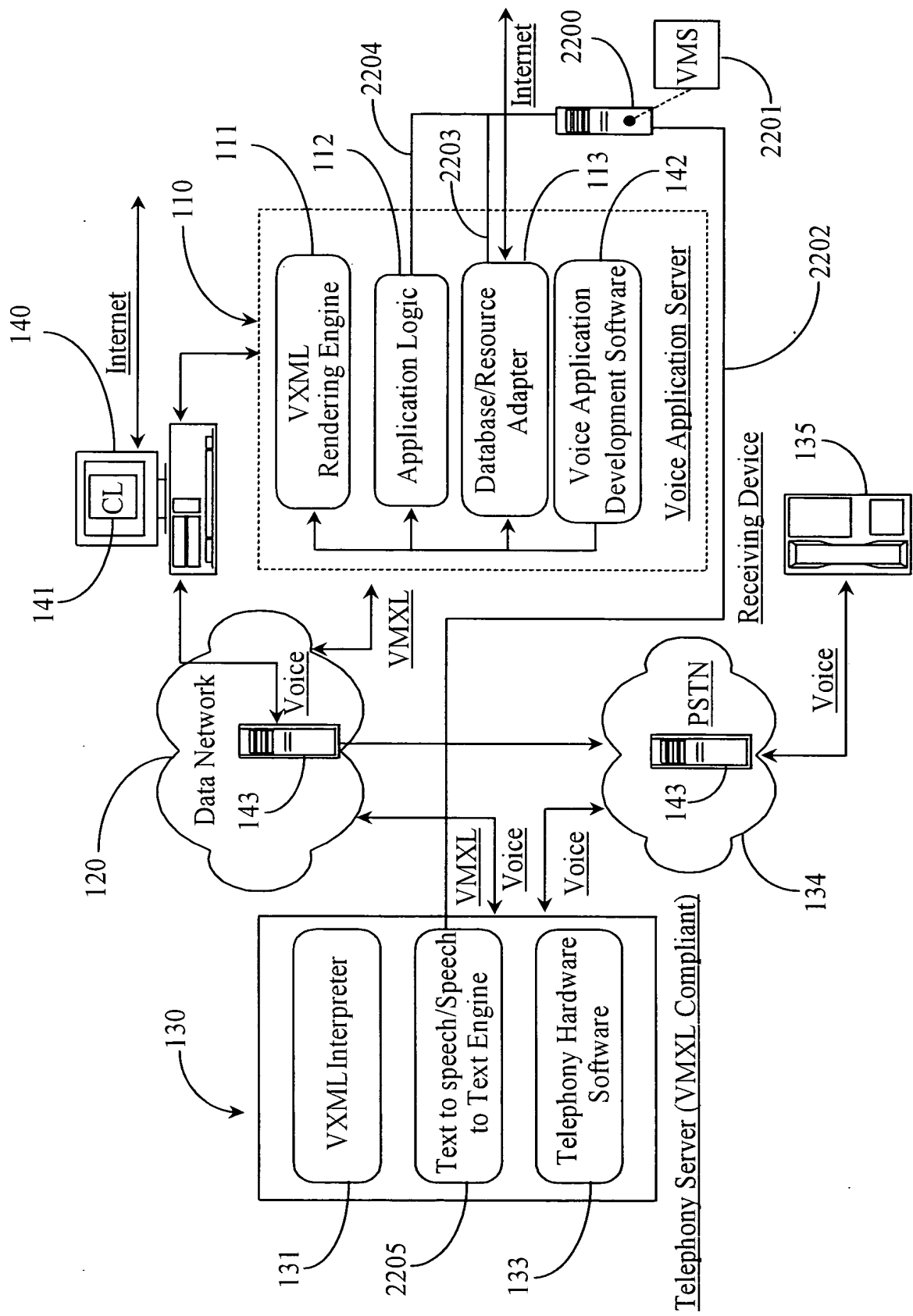


Fig. 22

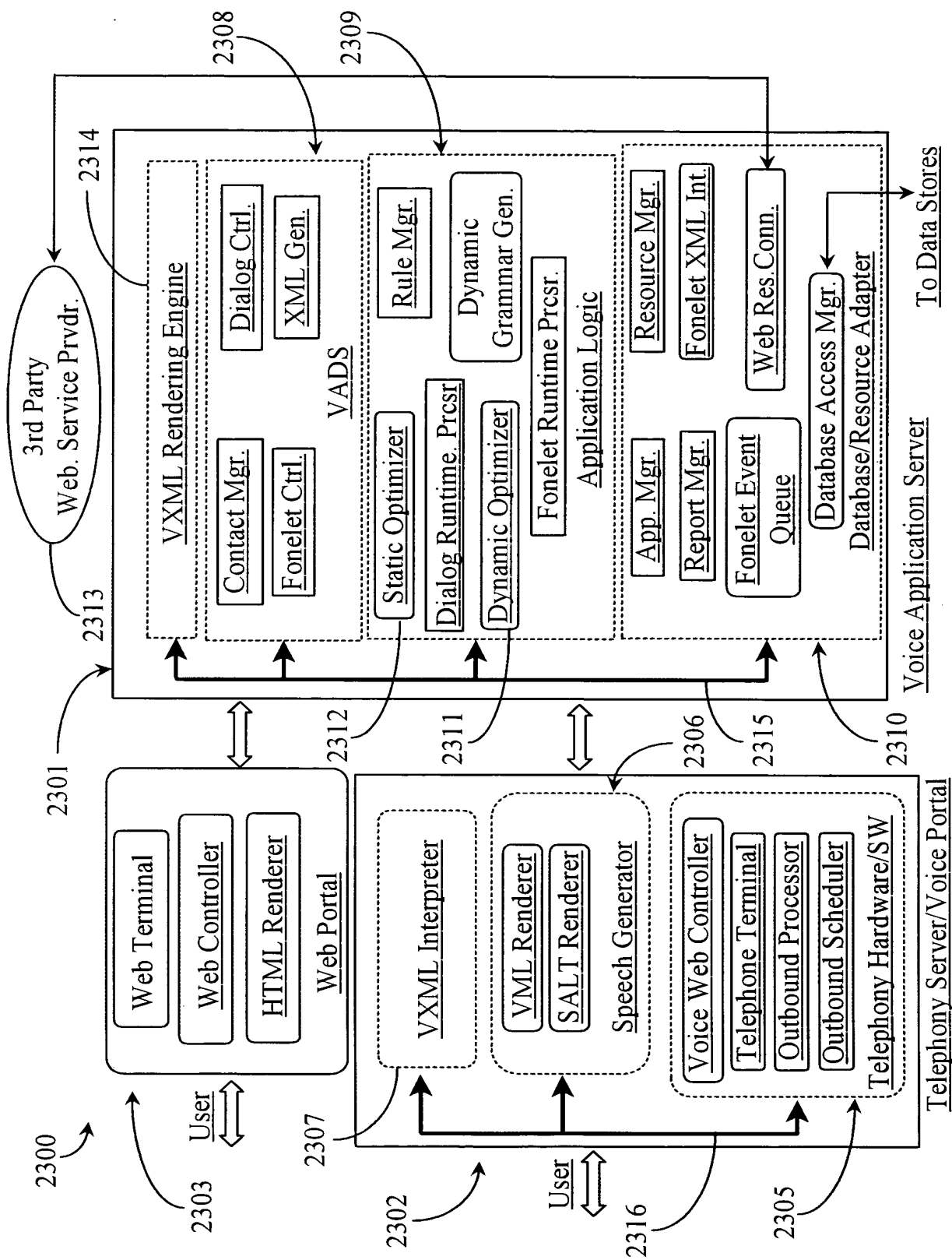


Fig. 23

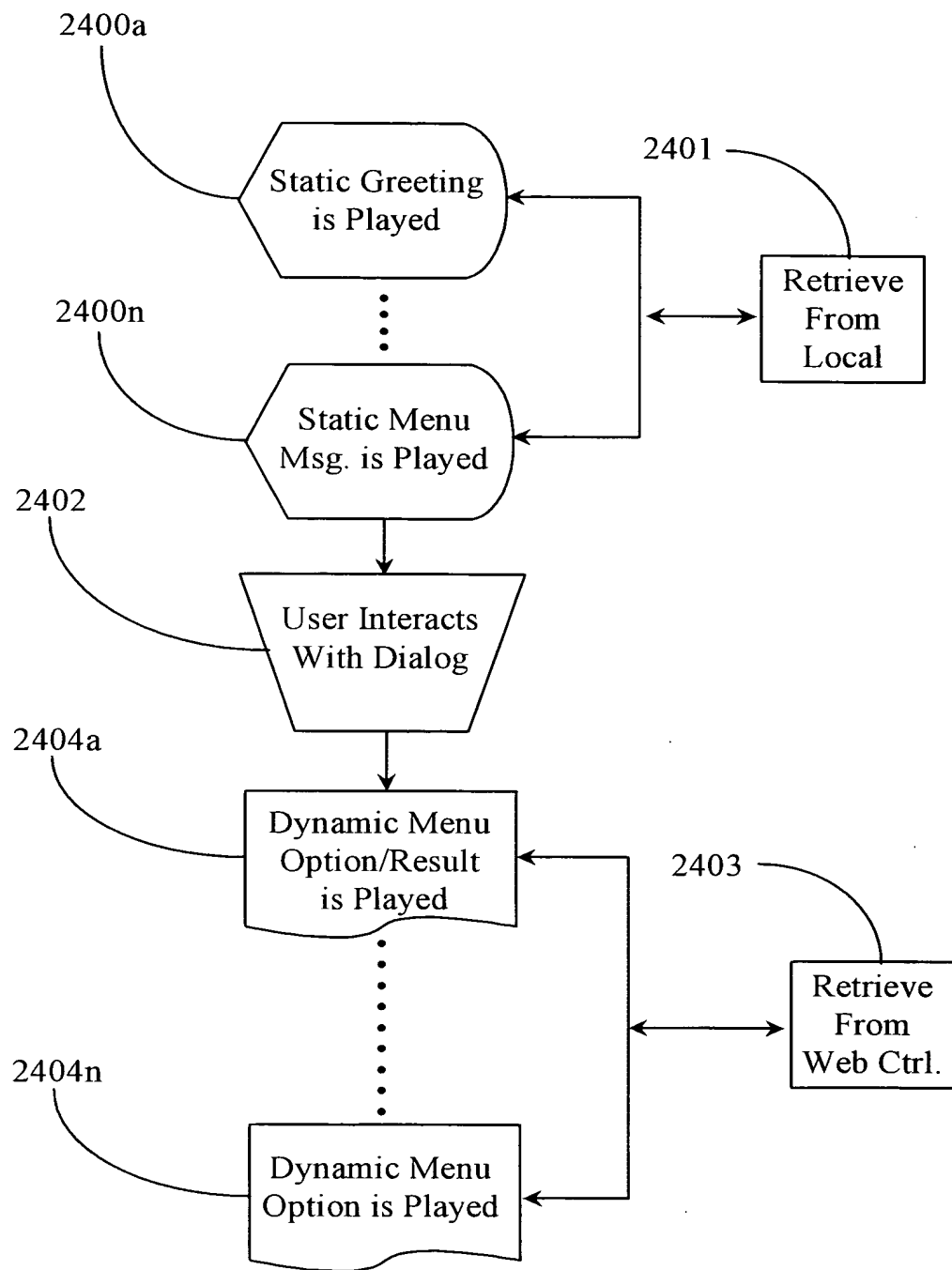
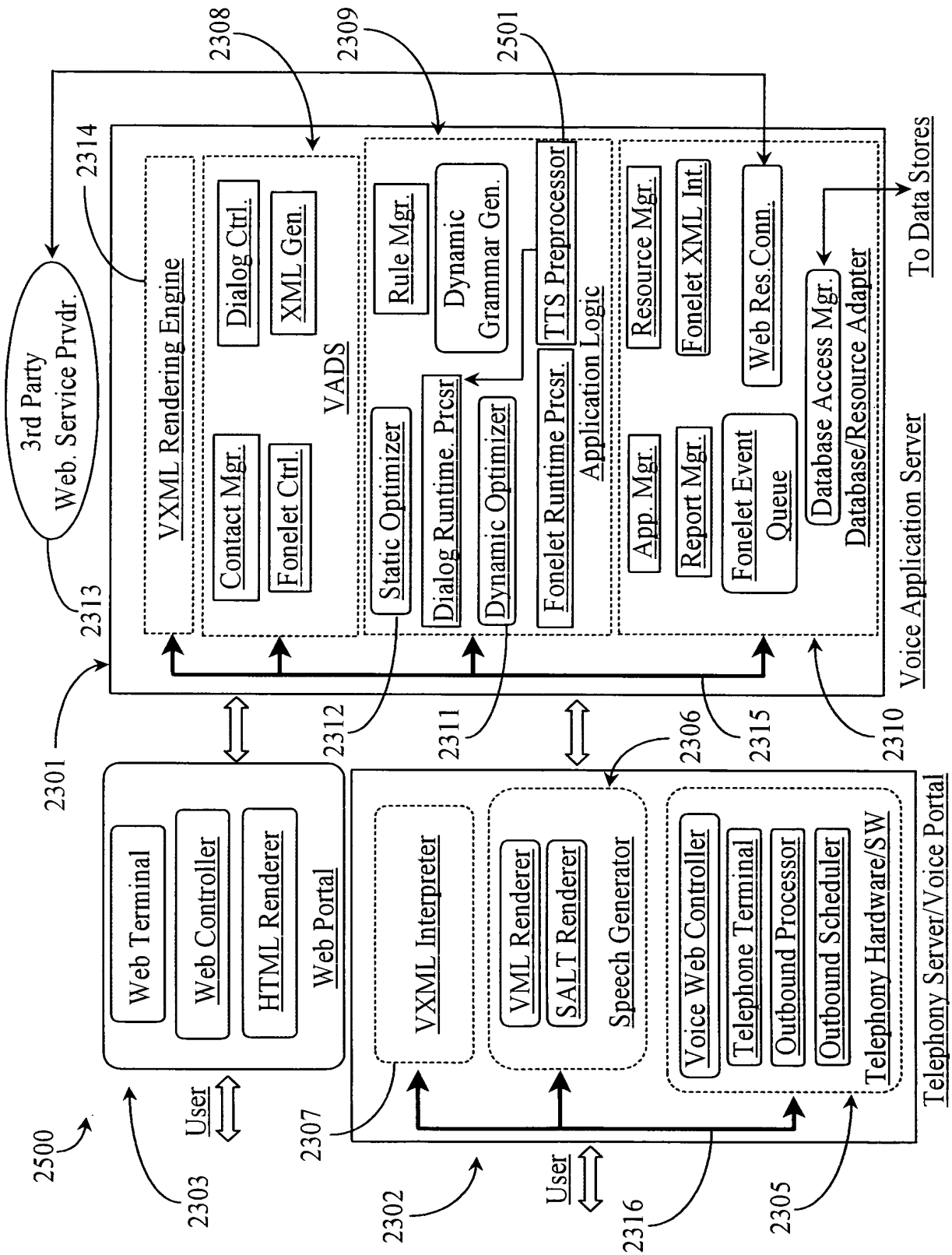


Fig. 24



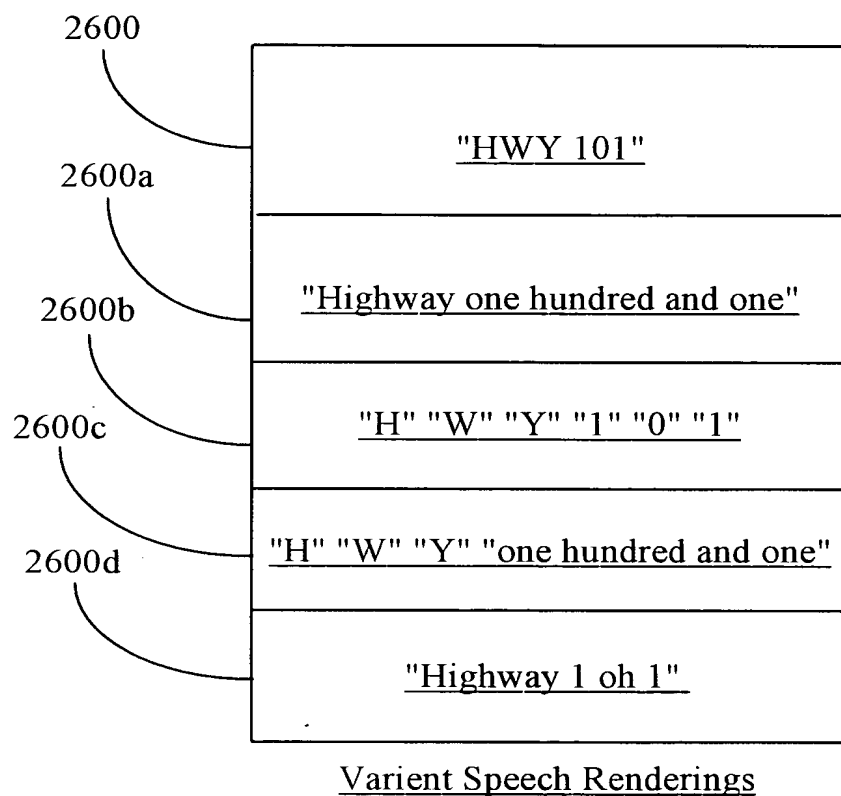


Fig. 26

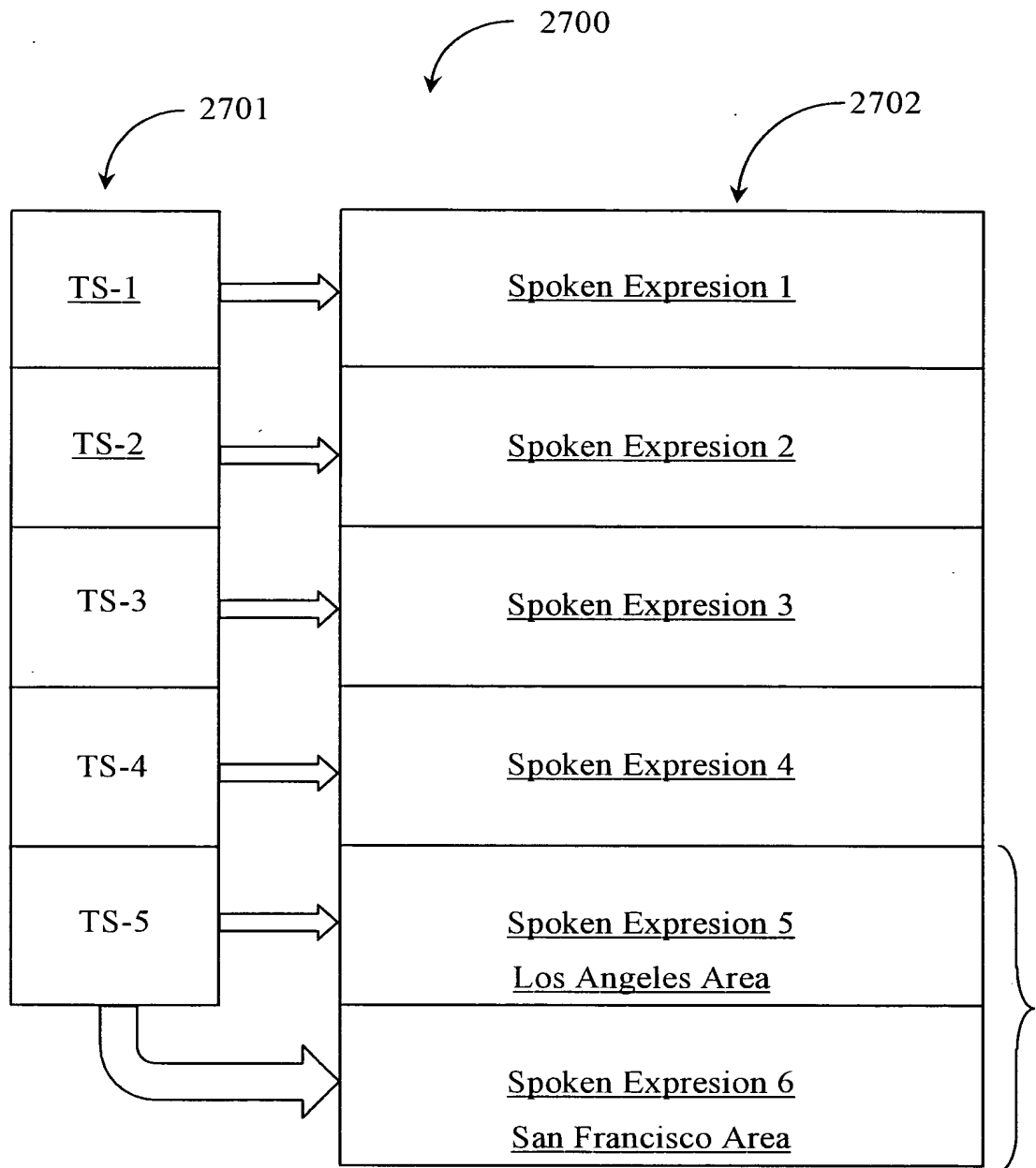


Fig. 27

2800		2301	3rd Party	2314
			Web. Service Prvdr.	
			2313	
	Web Terminal		<u>VXML Rendering Engine</u>	
2303	<u>User</u>		<u>Contact Mgr.</u>	2308
	<u>Web Controller</u>		<u>Dialog Ctrl.</u>	
	<u>HTML Renderer</u>		<u>XML Gen.</u>	
2307	<u>Web Portal</u>		<u>VADS</u>	2309
		2801	<u>Dialog Runtime Prcsr.</u>	<u>Rule Mgr.</u>
2302	<u>VXML Interpreter</u>		<u>Behavioral</u>	<u>Dynamic</u>
	<u>VXML Renderer</u>		<u>Adaptation Engine</u>	<u>Grammar Gen.</u>
<u>User</u>	<u>SALT Renderer</u>		<u>Fonelet Runtime Prcsr.</u>	2501
	<u>Speech Generator</u>		<u>Application Logic</u>	
2316			<u>App. Mgr.</u>	<u>Resource Mgr.</u>
	<u>Voice Web Controller</u>	2306	<u>Report Mgr.</u>	<u>Fonelet XML Int.</u>
	<u>Telephone Terminal</u>	2315	<u>Fonelet Event</u>	
2305	<u>Outbound Processor</u>		<u>Queue</u>	<u>Web Res.Conn.</u>
	<u>Outbound Scheduler</u>		<u>Database Access Mgr.</u>	
	<u>Telephony Hardware/SW</u>		<u>Database/Resource Adapter</u>	
	<u>Telephony Server/Voice Portal</u>	2310	<u>Voice Application Server</u>	<u>To Data Stores</u>

Fig. 28

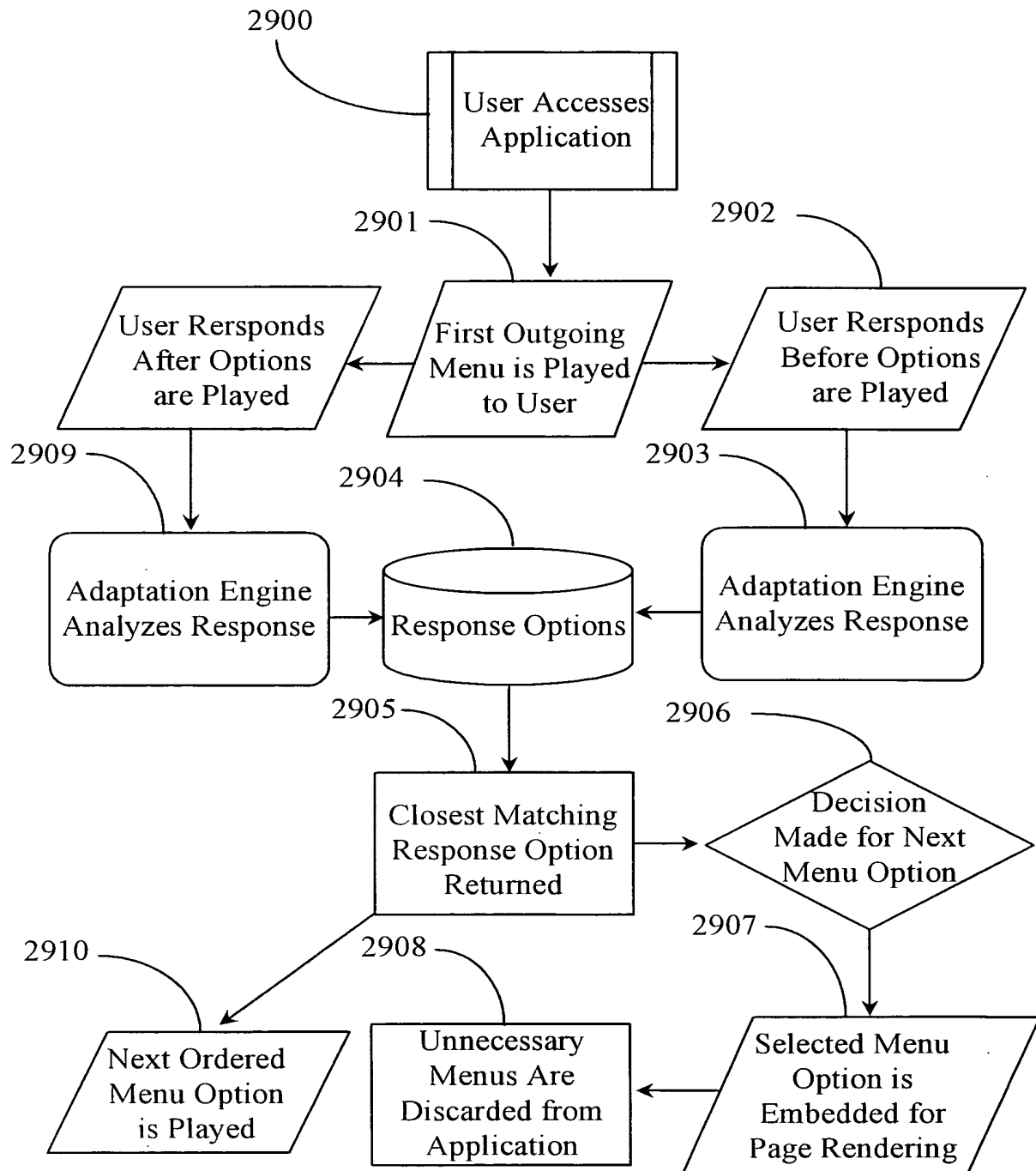


Fig. 29

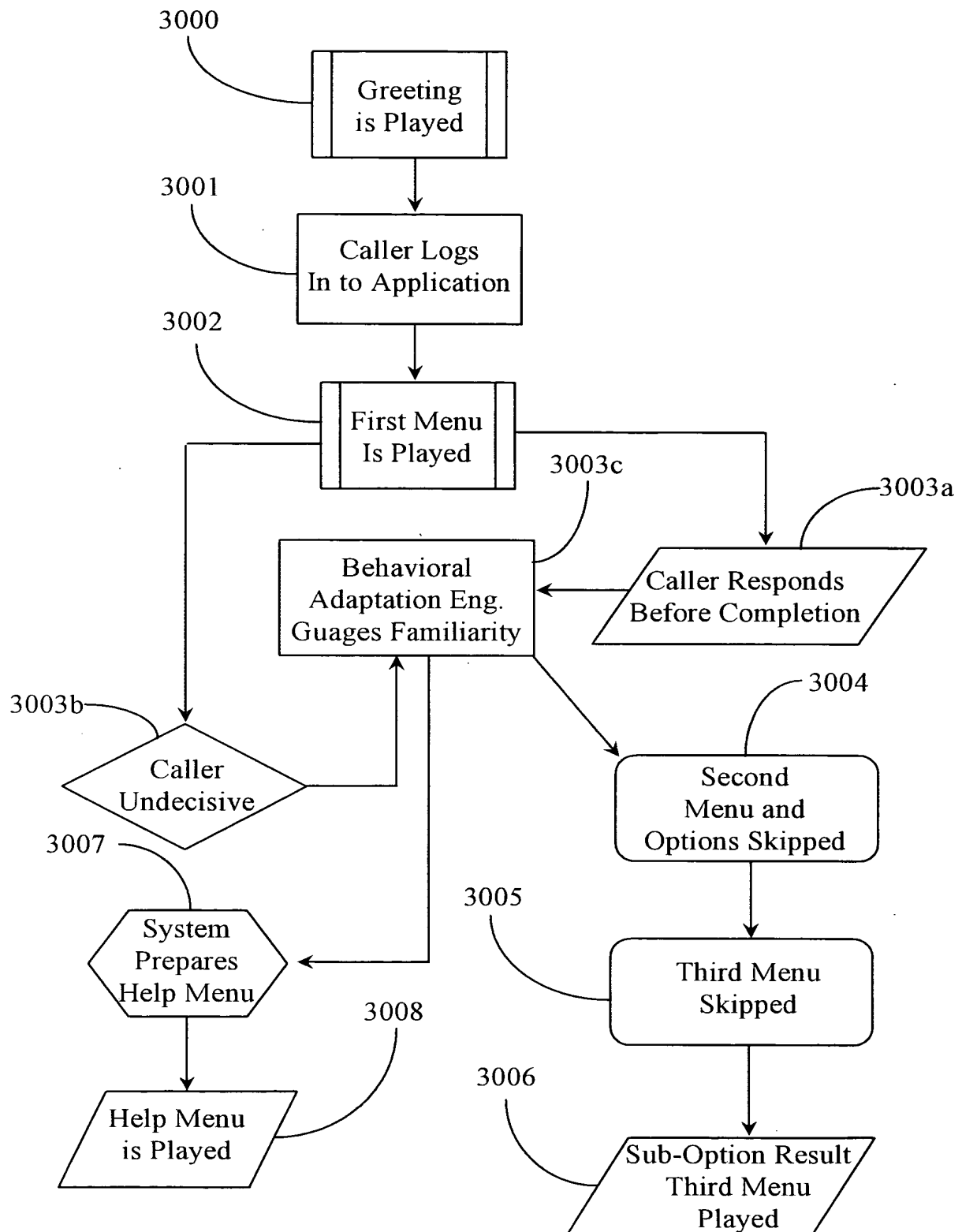


Fig. 30

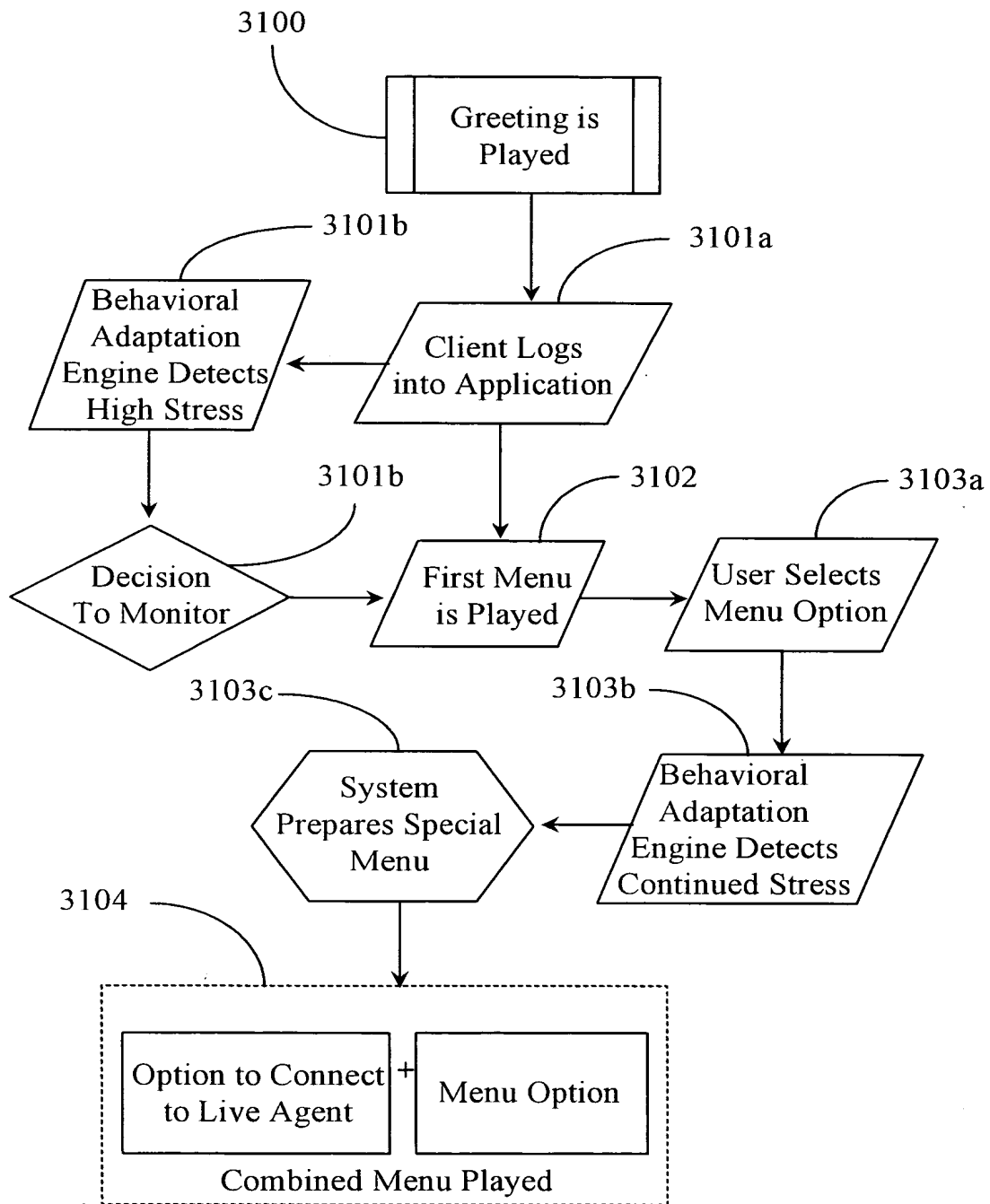


Fig. 31

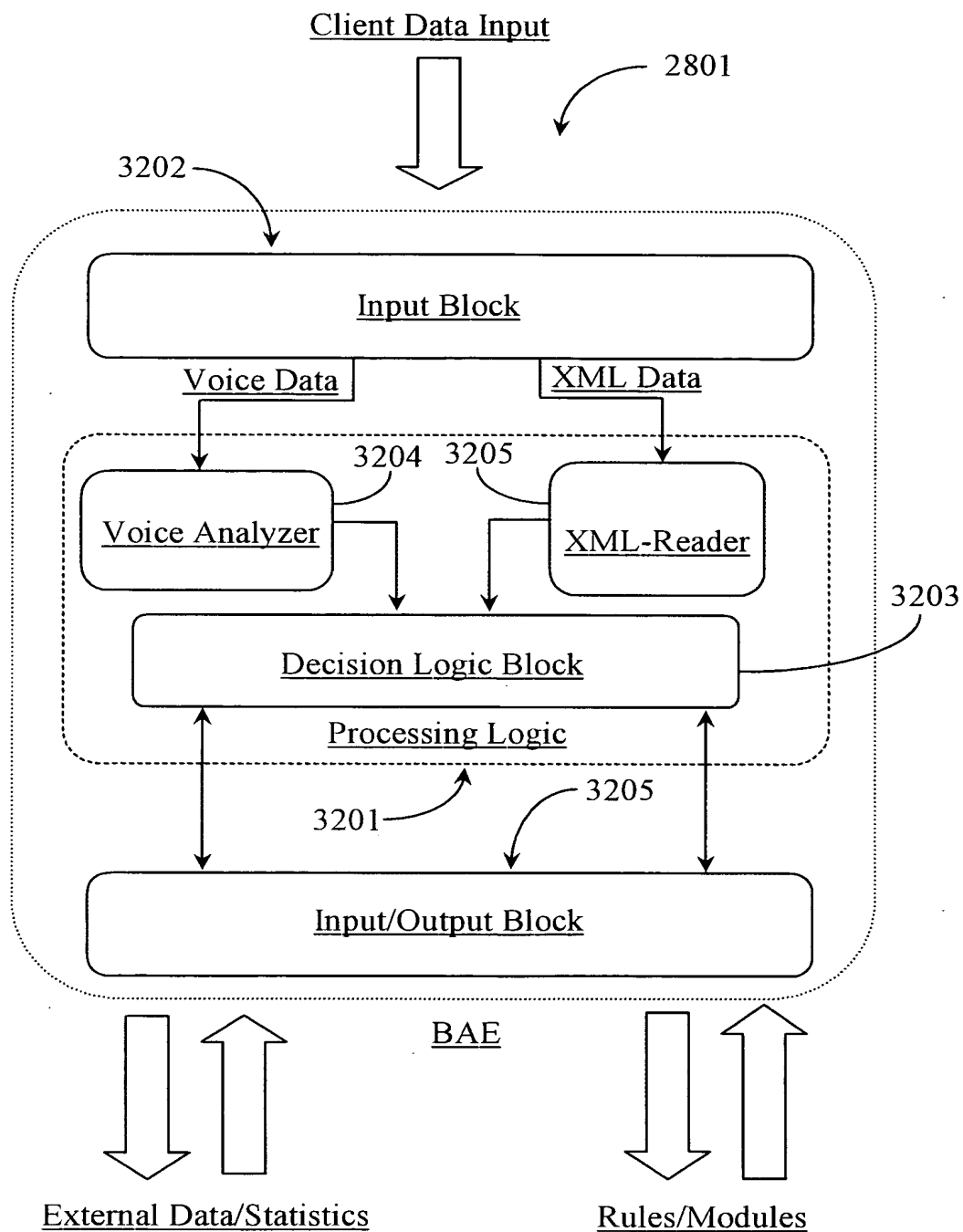


Fig. 32

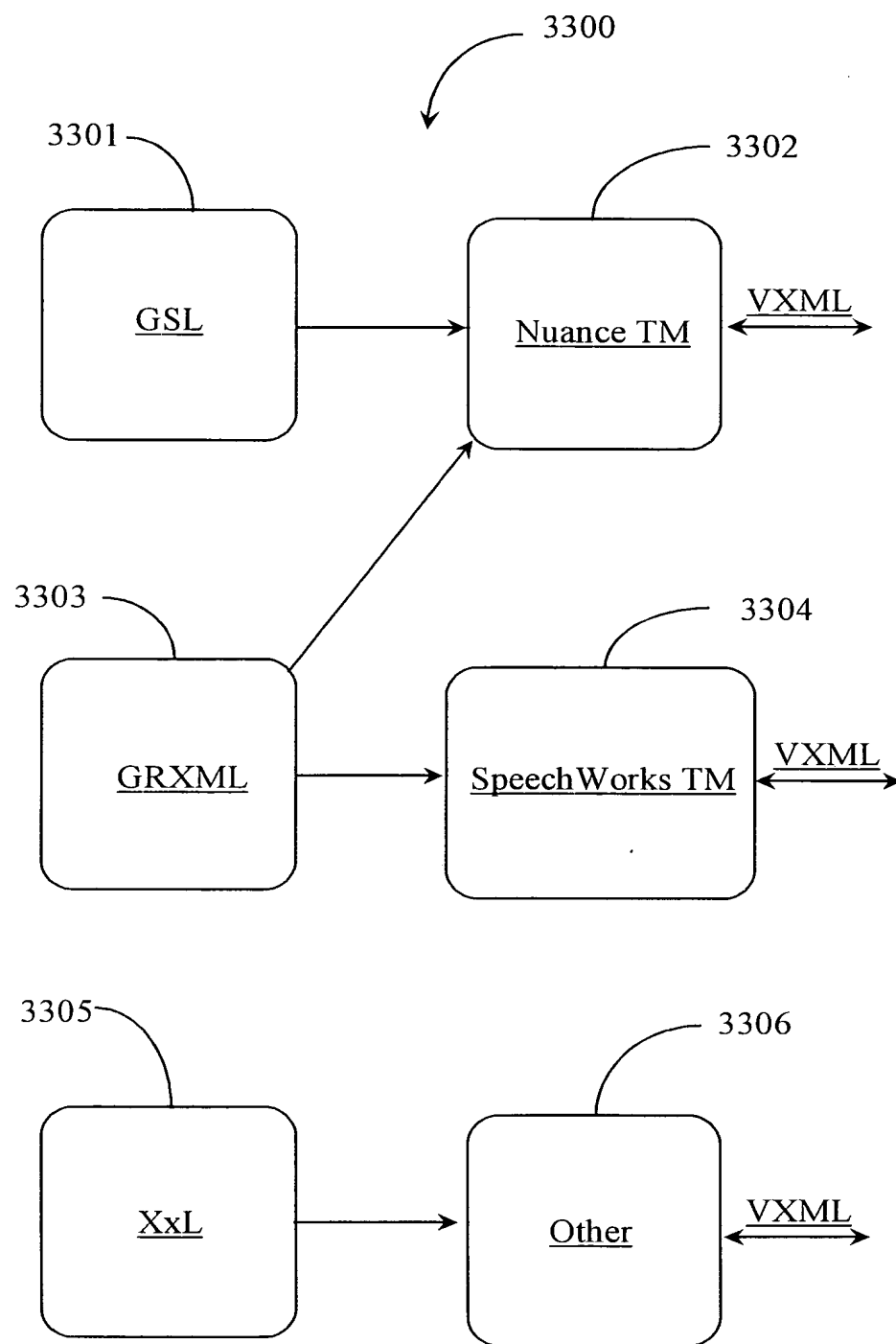


Fig. 33. (Prior Art)

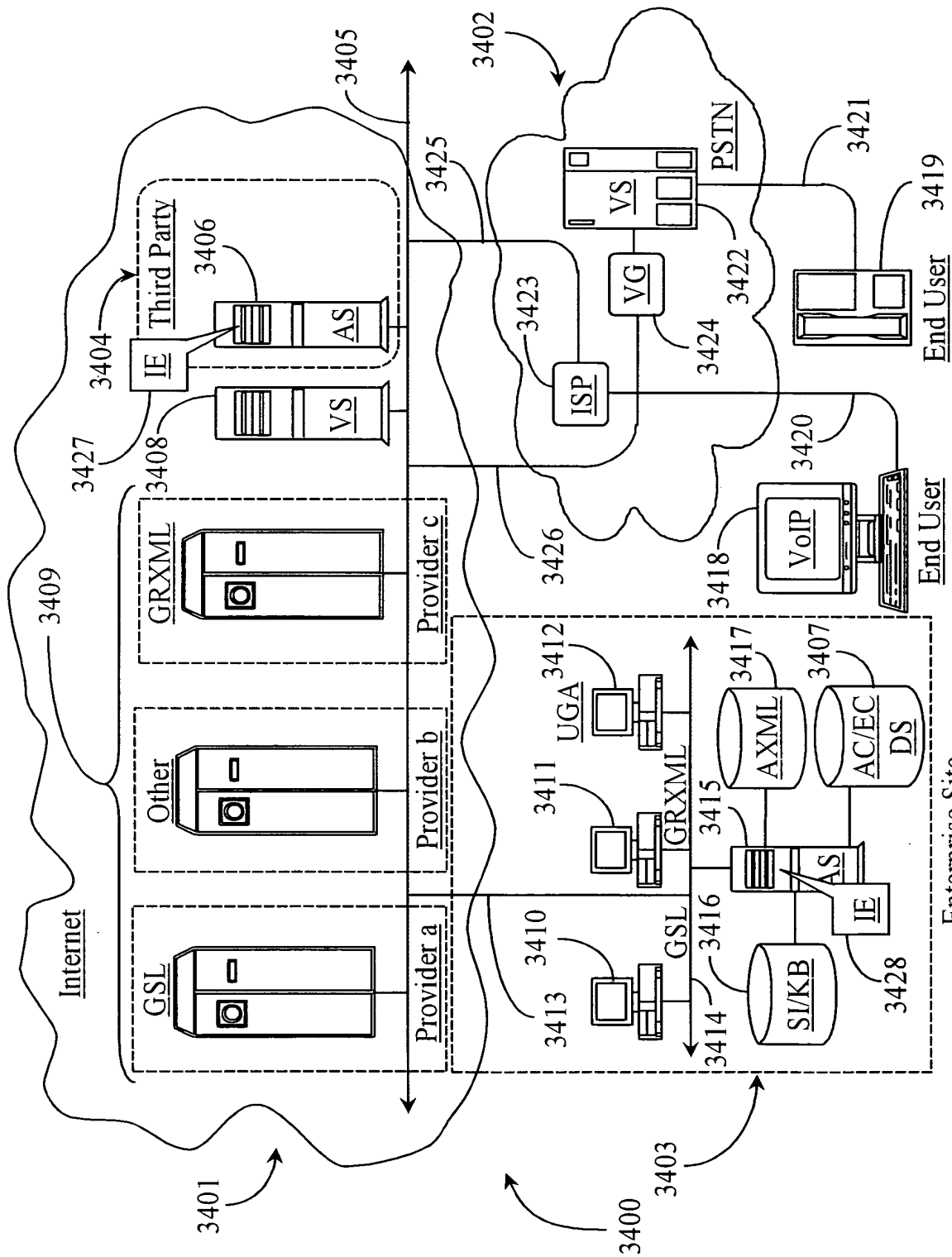


Fig. 34.

```

<?xml version="1.0"?>
<GRAMMAR toplevel="YesNo" mode="1">
  <ANDGRAMMAR name="ROOT" return="yes" scope="public">
    <ITEMLIST>
      <ITEM type="rule">Boolean</ITEM>
    </ITEMLIST>
  </ANDGRAMMAR>
  <ANDGRAMMAR name="Boolean" return="yes" scope="public">
    <ITEMLIST>
      <ITEM repeat="0-1" type="rule" type="0.01">PreFiller</ITEM>
      <ITEM type="rule">YesNo</ITEM>
    </ITEMLIST>
  </ANDGRAMMAR>
  <ORGRAMMAR name="PreFiller" return="no" scope="private">
    <ITEMLIST>
      <ITEM>hm</ITEM>
      <ITEM>um</ITEM>
      <ITEM>uh</ITEM>
    </ITEMLIST>
  </ORGRAMMAR>
  2 <ORGRAMMAR name="YesNo" return="yes" scope="private">
    <ITEMLIST>
      <ITEM type="rule">Yes</ITEM>
      <ITEM type="rule">No</ITEM>
    </ITEMLIST>
  </ORGRAMMAR>
  <ORGRAMMAR name="Yes" return="no" scope="private">
    <ITEMLIST>
      <ITEM type="text">yes</ITEM>
      <ITEM type="text">yup</ITEM>
      <ITEM type="text">yeah</ITEM>
      <ITEM type="text">right</ITEM>
      <ITEM type="text">correct</ITEM>
    </ITEMLIST>
  </ORGRAMMAR>
  <ORGRAMMAR name="No" return="no" scope="private">
    <ITEMLIST>
      <ITEM type="text">no</ITEM>
      <ITEM type="text">nope</ITEM>
      <ITEM type="text">wrong</ITEM><ITEM type="text">incorrect</ITEM>
    </ITEMLIST>
  </ORGRAMMAR>
</GRAMMAR>

```

Fig. 35

```

<grammar xml:lang="en-US" version="1.0" root="YesNo" mode="voice">
<rule id="ROOT" scope="public">
<one-of>
<item tag="response=n0">
<item tag="n0=Boolean.response;"><ruleref uri="#Boolean"/></item>
</item>
</one-of>
</rule>
<rule id="Boolean" scope="public">
<one-of>
<item tag="response=n1">
<item weight="0.01" tag="n0=PreFiller.response;"><count
number="optional"><ruleref uri="#PreFiller"/></count></item>
<item tag="n1=YesNo.response;"><ruleref uri="#YesNo"/></item>
</item>
</one-of>
</rule>
<rule id="PreFiller">
<one-of>
<item>hm</item>
<item>um</item>
<item>uh</item>
</one-of>
</rule>
<rule id="YesNo">
<one-of>
<item tag="response='yes';"><ruleref uri="#Yes"/></item>
<item tag="response='no';"><ruleref uri="#No"/></item>
</one-of>
</rule>
<rule id="Yes">
<one-of>
<item>yes</item>
<item>yup</item>
<item>yeah</item>
<item>right</item>
<item>correct</item>
</one-of>
</rule>
<rule id="No">
<one-of>
<item>no</item>
<item>nope</item>
<item>wrong</item>
<item>incorrect</item>
</one-of>
</rule>
</grammar>

```

Fig. 36

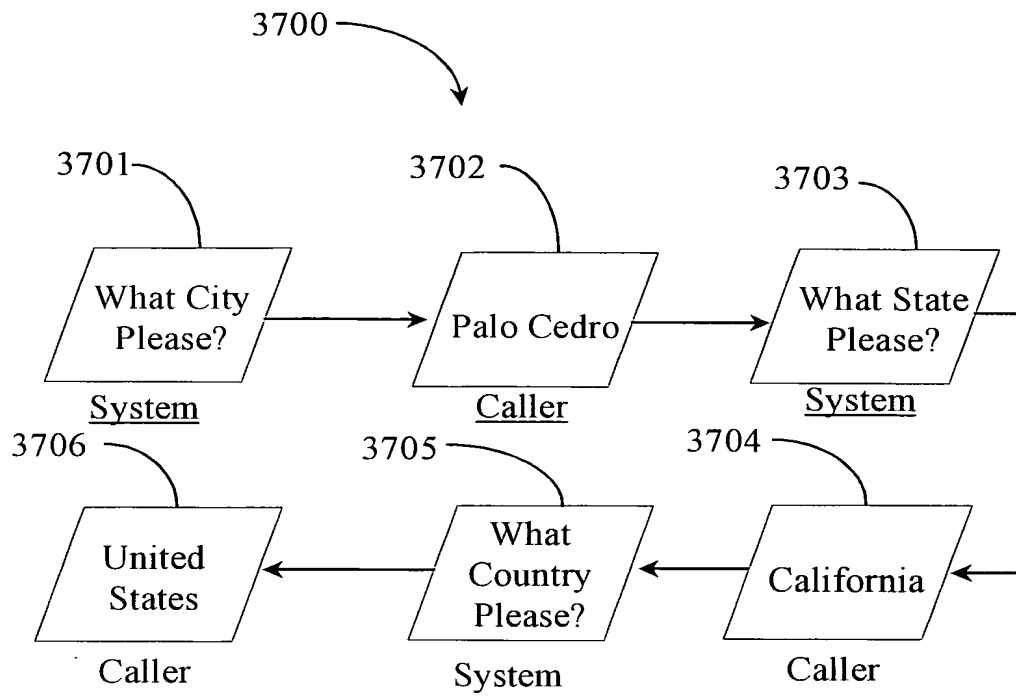


Fig. 37A (prior art)

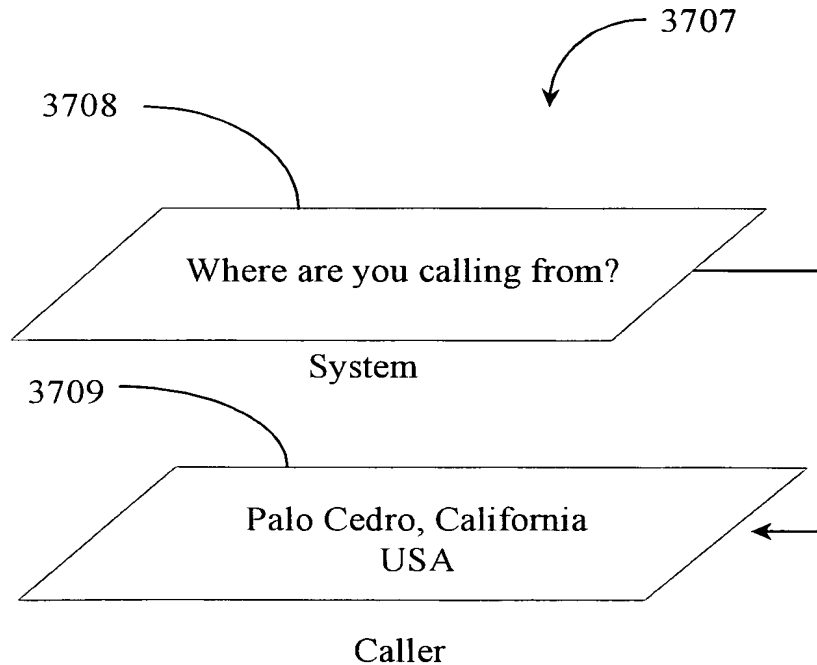
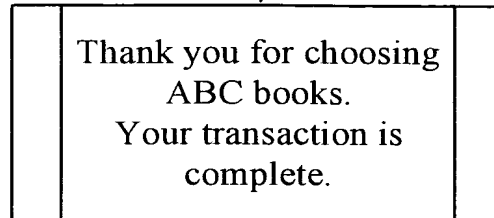


Fig. 37B (multi-data capture)

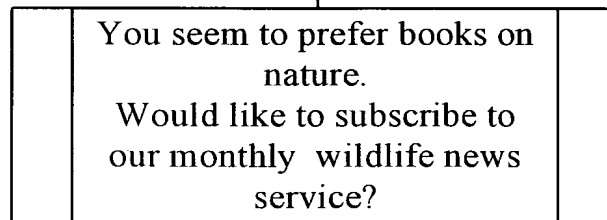
3800



System static response

Fig. 38A (static-prior art)

3801



Content intelligent

Fig. 38A

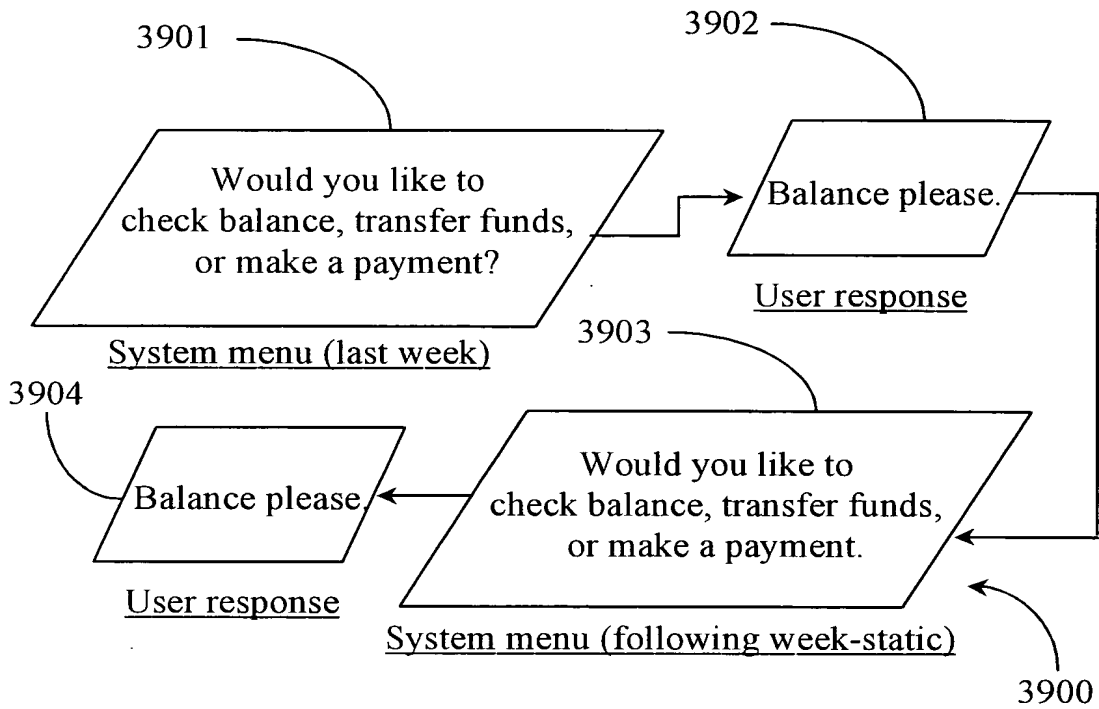


Fig. 39A (prior art)

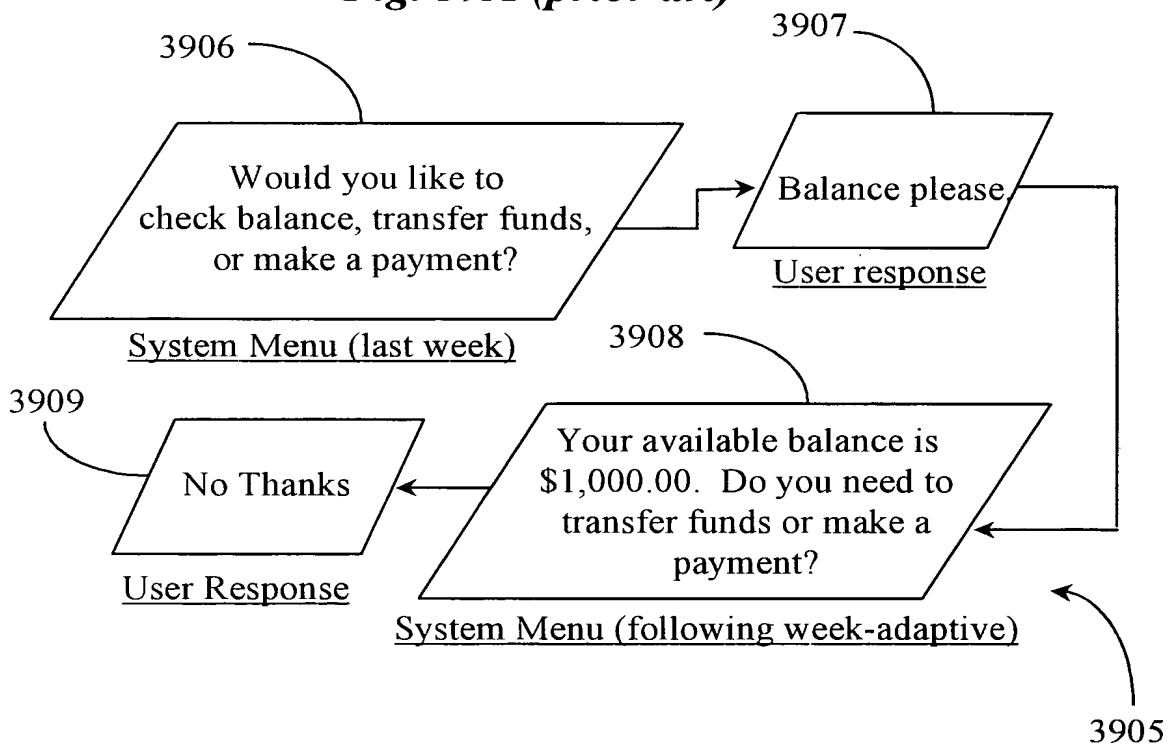


Fig. 39B

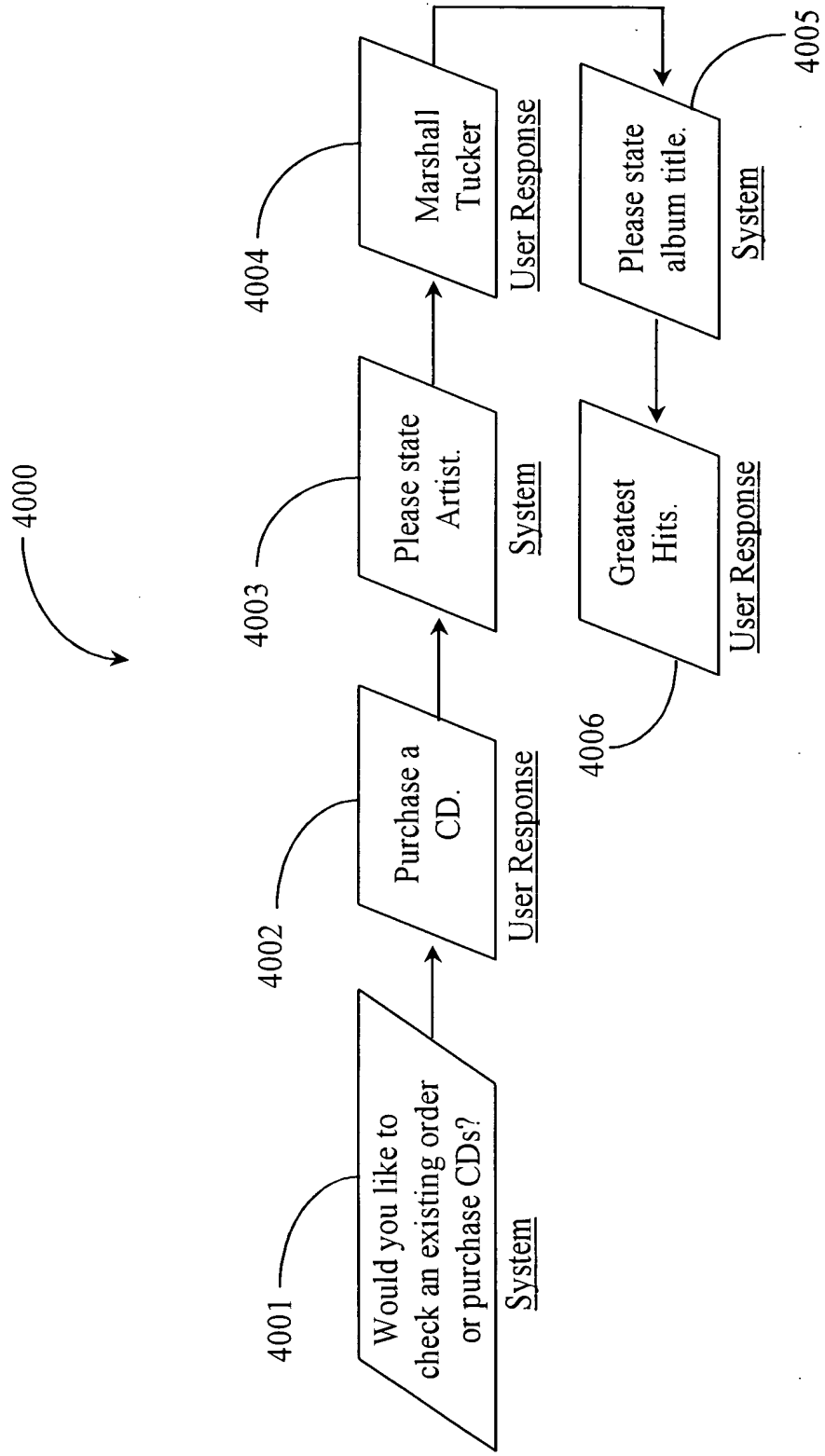


Fig. 40A (prior art)

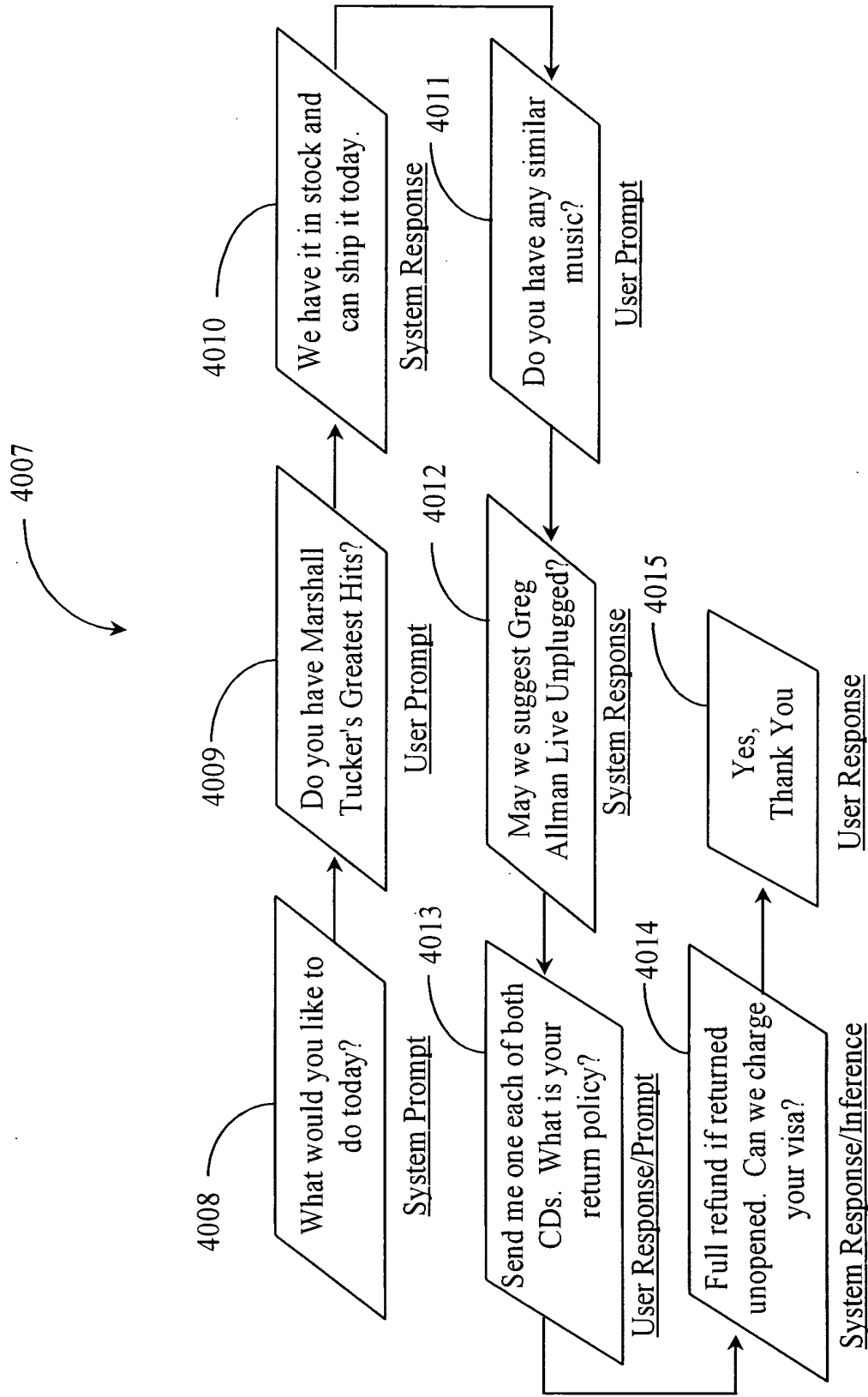
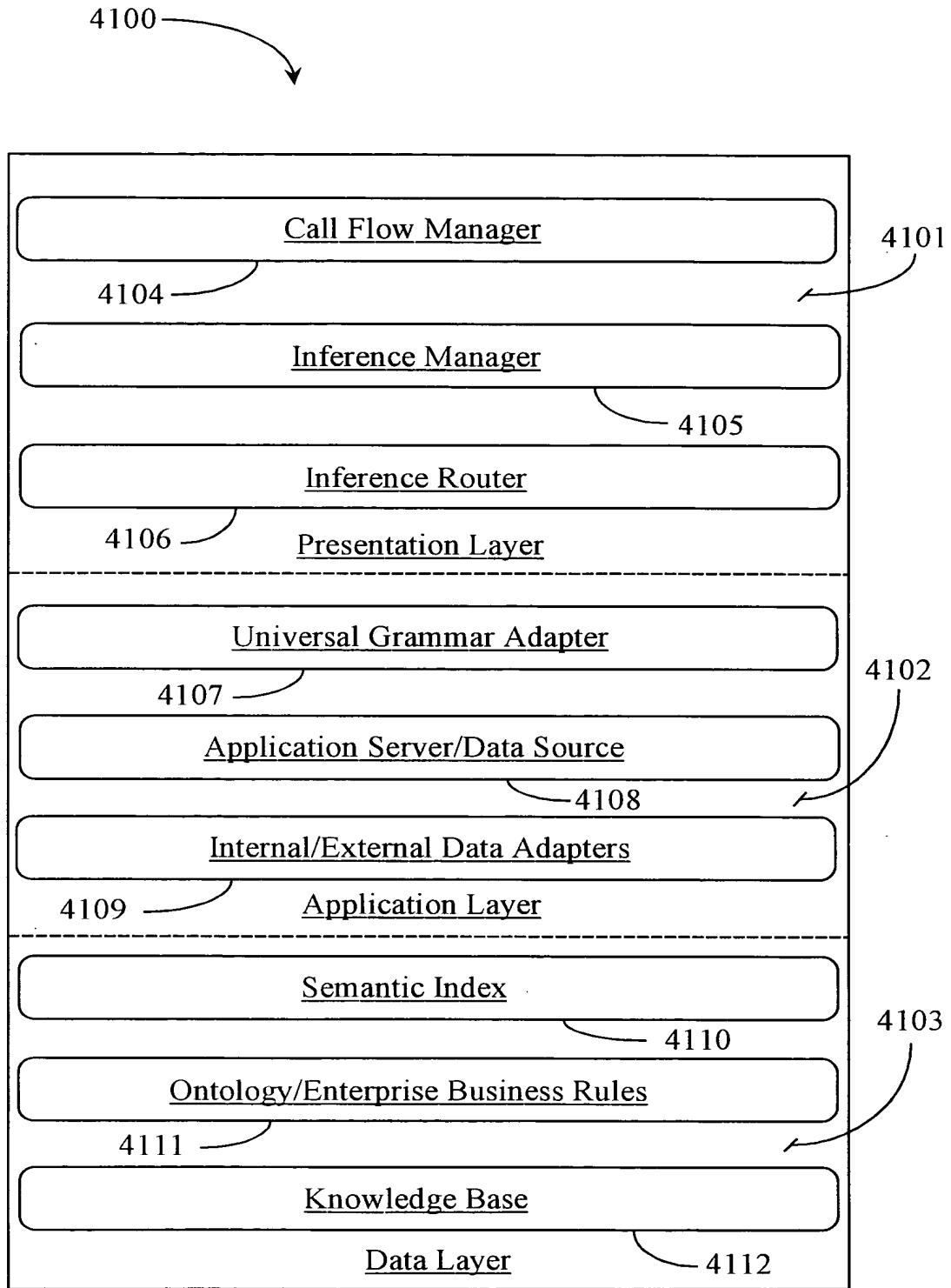


Fig. 40B (natural language recognition)



Inference Engine Architecture

Fig. 41

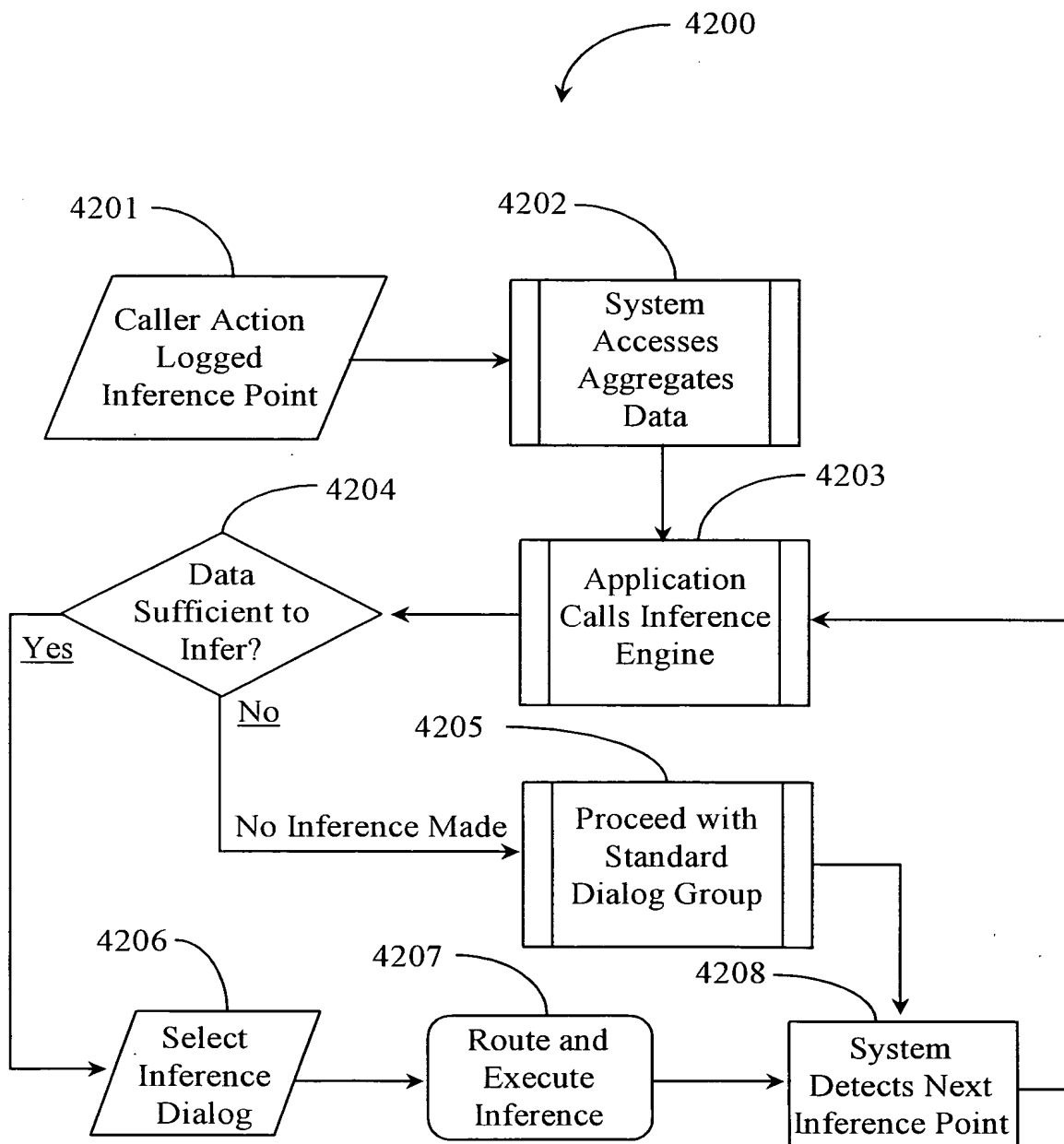


Fig. 42